

With the right help, bears can recover from the torture of bile farming

October 19 2018, by Edward Narayan



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Bear bile farms, which exist in some Asian countries like [Vietnam](#) and

[China](#), are a terrible reality for Asiatic black bears (*Ursus thibetanus*).

The bears spend their lives confined in tiny steel or concrete cages. They are "[milked](#)" through permanent holes in their side that allow bile to be extracted from the gall bladder.

My research, published in the journal [Animal Welfare](#), investigated the chronic [stress](#) created by these conditions. We found that with care and rehabilitation, rescued bears in animal sanctuaries can readjust to a normal lifestyle with a reduction in stress – a highly encouraging result.

What's so precious about bile?

[Bile](#) is a greenish-brown fluid produced by the liver in [humans](#) and [most vertebrates](#). Bile acid aids digestion of fats – and one particular bile compound, called [ursodeoxycholic acid](#), could have potential [pharmaceutical applications](#).

Because of this, bear bile is highly sought in [traditional Chinese medicine](#). It is believed to reduce gall stones and improve indigestion, among other things. However, non-animal-derived and synthetic alternatives exist for [urosoxycholic acid](#) and other bile components.

The use of Asiatic black bears as primary sources of bile is a significant [animal welfare](#) problem that needs global awareness. Most of the bears are introduced to the trade upon poaching from the wild, and cubs as young as a few months are caged and [held captive](#) for up to 30 years.

I worked with the international welfare organisation [AnimalsAsia](#), which runs [rescue and rehabilitation programs](#) in Asia and has moved hundreds of bears into sanctuaries.

My research investigated how successful this rehabilitation is, and

whether rescued bears can recover from their experiences.

Animal cruelty causes chronic stress

Stress is [defined](#) as any unpleasant physical or psychological change that creates an uncomfortable feeling and negative outcome.

Not surprisingly, bears at bile farms in Vietnam have significantly higher levels of [stress hormones](#) than bears living in sanctuaries. This is the first scientific evidence of the chronic stress created by bear bile farming.

Stress in vertebrates (like humans and bears) is a physiological response in the endocrine system, also known as the [hypothalamus-pituitary adrenal](#) axis. This is the body's main control centre for all things related to stress.

Stress hormones like cortisol help regulate the metabolism, especially in times of short-term or [acute stress](#) such as "[fight or flight](#)" situations. In normal situations, sharp stress causes an increase of cortisol that allows an animal to react quickly to a dangerous situation. Once the danger passes, a [negative feedback loop](#) reduces [cortisol](#) production and keeps the body stable.

But [chronic stress](#) can lead to harmful changes in the stress endocrine system. Long-term cortisol overproduction weakens the body's ability to fend off daily challenges, and increases the risk of disease and death. In [humans](#), [chronic stress](#) contributes to problems with the cardiovascular, immune and central nervous systems.

The presence of what we call "[stress biomarkers](#)" in [faeces](#) or [hair](#) can be a very useful tool for assessing animal welfare.

We measured cortisol levels in bear faeces to rapidly and reliably check

their [stress levels](#).

This was particularly useful because we did not have to restrain the rescued bears, a process that would understandably upset them more than their peers.

Reversing chronic stress in bear sanctuaries

Chronic stress is a massive challenge for the successful rehabilitation of animals into their new environment. Careful monitoring of stress is essential in animal rescue and [translocation programs](#) because it can provide information on the physiological resilience of each animal, and help rescuers understand how the animals might respond to humane interventions and veterinary checks.

Rescued bears are given special veterinary care and integrated into the bear sanctuary after several months of careful physiological and behavioural assessments.

Our [data](#) show that although not all bears fully recover from living on a bile farm, they generally manage to reduce their [stress hormone levels](#) under the [rehabilitation program](#).

Like humans, animals need [love and care](#). [Stress reseach](#) has shown humane treatment can [reverse chronic stress](#) – and our study has found that is true even for [animals](#) who have experienced intolerable treatment.

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Citation: With the right help, bears can recover from the torture of bile farming (2018, October 19) retrieved 8 April 2024 from

<https://phys.org/news/2018-10-recover-torture-bile-farming.html>

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