

MEDICINAL USE OF PLANTS BY ORANG-UTANS

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The medicinal use of plants by orang-utans (*Pongo pygmaeus wurmbii*) has been observed in the peat-swamp forests of Central Kalimantan, Borneo. A fur-rubbing behaviour was witnessed on several occasions, in which leaves were chewed up and the resulting soapy lather was rubbed onto the arms and legs, concentrated on the joints. Most instances of this behaviour have been from a single species of plant (*Dracaena* sp.) which has been tested for chemical properties. We found that this plant contains compounds which inhibit TNF α -induced E-selectin production, thus acting as an anti-inflammatory agent. This validates its use as a medicinal plant by orang-utans. The use of leaf 'plasters' by orang-utans to stop bleeding has also been observed. Self-medication by apes has previously only been documented in chimpanzees and gorillas, although these cases differ in that they involve the ingestion of medicinal plants. Thus this is the first time that external self-medication (fur-rubbing) in apes has been reported, and the first case of self-medication in orang-utans. This finding is also important for studies of ethno-medicine. The local indigenous people from the area use this species to treat their arms after a stroke, for muscular pain, and for sore bones and swellings. Many indigenous communities have obtained knowledge on medicinal plants by observing their use by sick animals.

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