

Infectious disease: Causal agent of Kawasaki disease may be wind-borne

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Incidence of Kawasaki disease may be linked to large-scale wind currents, which originate in central Asia and traverse the north Pacific, suggests a paper published in *Scientific Reports*. The causal agent for the disease remains unknown but the results provide a basis for testing the hypothesis that the environmental trigger is potentially distributed by the wind.



Kawasaki disease is an acute vasculitis that affects the coronary arteries. It mainly affects children under the age of five and is the most common cause of acquired childhood heart disease in Japan and the United States. Xavier Rodo and colleagues analyzed three major epidemics of Kawasaki disease in Japan; major, non-epidemic, inter-annual fluctuations of Kawasaki cases in Japan and San Diego; and seasonal variations of the disease in Japan, San Diego and Hawaii.

Fluctuations in numbers of Kawasaki cases appear to be associated with similar variations in wind circulation, the authors report. The peak in cases in each of the three locations is linked with a coherent seasonal shift in winds that simultaneously exposes Japan to air masses from central Asia, and Hawaii and California to air masses from the western north Pacific. The inter-annual analysis also suggests that the enhancement of this trans-Pacific circulation pattern may be associated with unusually high Kawasaki disease activity in Japan and San Diego.

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