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The possibility that fluids from below the can modify conditions in the seismogenic crust for the release of large earthquakes reveals new possibilities for earthquake warnings on a long and short time scale.

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Upflow of fluids from below the brittle crust has for a long time been tackled in volcanology. It has also been suggested for quite some time on basis of observations that fluids from below must be significant for releasing earthquakes, small earthquakes in rift zones and even large earthquakes in seismic zones. Such suggestions have sometimes be calmed down by the statements, on one hand that thermal out flow is low and thus does not indicate dyke injections, and on the other hand by claiming that hot and high pressurized fluids would dissipate into the surrounding crust in stead of keeping up high pore fluid pressures there. Recent modeling by Zencher et al 2006 (Geophys. J. Int.) shows that in conditions as prevailing in the basaltic crust of Iceland, near lithostatic pore/fluid pressures can in response to strain build up, be brought up into the seismogenic zone to modify conditions there for the release of large earthquakes. The earth realistic parameters for the modeling involve low permeability in the crust. The possibility that fluids from below can build up high pore fluid pressures in the crust means that we can find processes leading to large earthquakes long before them and by adequate monitoring follow the build up of conditions leading to earthquakes. In Iceland this involves to find the fault on an early stage, possibly years before towards seeing the short term effects of breaking the asperity. The basic information needed come from high level continuous evaluation of microearthquakes. This modeling is supported by observations in Iceland, and may be applied at other places where high pore fluid pressures are available below or at depth in the crust,