

# Macroscopic manifestations of inflammation

Four so-called **Cels signs** are derived from the macroscopic manifestations of skin inflammation, to which Virchow added a fifth:

1. **rubor** - redness of the inflammatory focus caused by hyperemia;
2. **calor** - heating of the inflammatory focus;
3. **dolor** - soreness of the inflammatory focus by irritation of peripheral nerve endings with acidic pH and cytokines;
4. **tumor** - swelling of the inflammatory focus by expansion of capillaries and inflammatory edema;
5. **functio laesa** - attenuation or, on the contrary, increased function (e.g. hypersecretion of mucus by an inflamed mucous membrane).

## General manifestations of inflammation

1. Elevated temperature;
2. leukocytosis;
3. increased sedimentation;
4. increased levels of acute phase proteins.

## Links

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### Source

- POVÝŠIL, Ctibor – ŠTEINER, Ivo. *Obecná patologie*. 1. edition. Galen, 2011. 290 pp. ISBN 978-80-7262-773-8.