The Scent of Cents

The next time you smell something funny on your skin after you've handled pennies, don't blame it on the copper — that eau de metal is actually coming from you.

Researchers tested the effects of various metals on human skin and found that what smells is not the metal, but the rapid interaction of skin oils with iron, copper and brass. The chemical reaction causes new, strongly scented gaseous compounds to form.

Research conducted at Virginia Tech has demonstrated that vapors emanating from the skin of people who handled iron were shown to contain aldehydes and ketones, both organic chemicals that give off strong odors. For example, acetone is the active ketone found in pungent-smelling nail polish remover.

Tests by Andrea Dietrich, in collaboration with Dietmar Glindemann of the University of Leipzig, Germany, show that skin oils react by forming different compounds when we touch various metals. The researchers postulate that everyone produces slightly different odors, and those odors may change if a person has a disease, such as cancer. In such instances, the variations in the scents could become a useful medical diagnostic tool.

"We're working to see if the smell caused by iron on skin provides a fingerprint of disease," says Glindemann.

On a more prosaic level, Dietrich adds that this research also may lead to innovative methods for eliminating the metallic taste often found in drinking water.