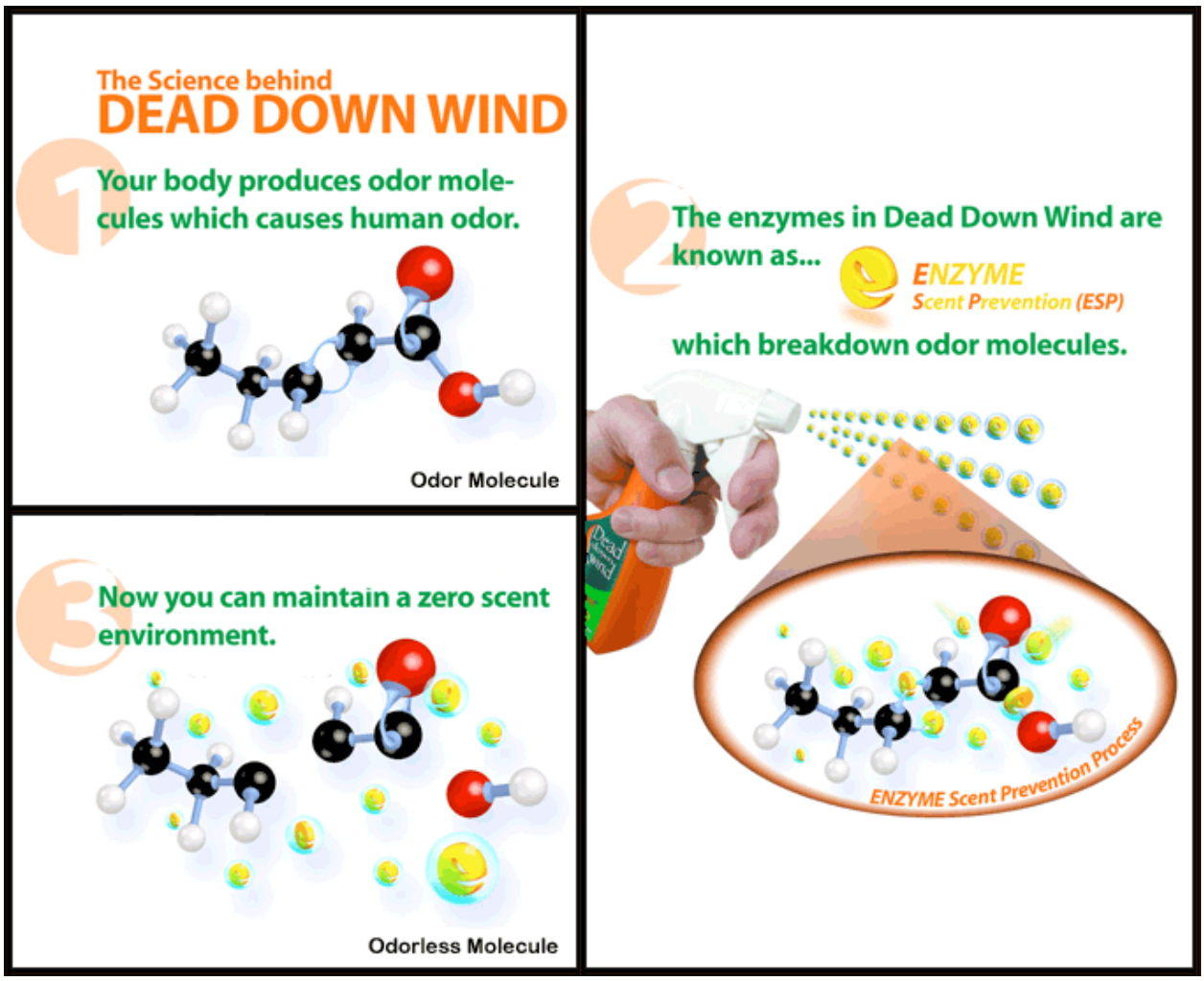
ScentPrevent®

ScentPrevent® Technology is based on decades of research, science and a diverse range of applications.

From the medical field and feminine hygiene products to septic and wastewater applications, there's more definitive documentation on the use of enzymes in odor control than all the other product methods put together in the hunting scent control category.



Dead Down Wind has revolutionized the scent elimination industry through a bio-engineered process known as ESP™ (Enzyme Scent Prevention). Through this process a strand of enzymes is created that targets human bacteria - the source of human odor. Without intervention your body produces bacteria that create human odor. Cover sprays can only attempt to mask these odors. Carbon clothing only attempts to contain it. The enzymes in Dead Down Wind actually PREVENT odor-causing bacteria from forming - allowing you to maintain a zero scent environment.

If you want the short answer, enzymes are catalysts for reactive change. They change the game or molecular structure of odor. There are varying methods for increasing the rate of change but that's another topic. They sometimes involve peptides similar to the antimicrobial peptides researchers in Germany found were also emitted from human glands to varying types of amino acids, very basic natural organic compounds. The short answer is enzymes work as a catalyst to change what was into something else. In scent control, you change the molecular structure causing the odor or create an environment that prevents or inhibits odor causing molecules from developing.

There are six main classes of enzymes and most enzymes help break down large molecules into smaller ones or fragments of the original molecule, releasing energy from their substrates. Within those six main classes of enzymes, scientists have already identified more than 10,000 different enzymes. Each one typically has a very specialized job or game changing ability. Some use oxidation reactions involving the transfer of one electron to another. If you remember your chemistry class and that was a long time ago for me, changing the molecular structure changes the game.

Other classes of enzymes as a catalyst bring about or facilitate the transfer of groups of atoms from one molecule to another. Keep in mind that still changes the game. In scent control that changes the odor molecule makeup. Every one of the six main classes of enzymes has a different reaction profile or the way they change the game. Once you define your objectives (The game changing results you want, like odor control or a highly effective laundry product with specific capabilities and results) you go looking for the right enzymes with the right stability and environmental tolerances to achieve those game changing results. One main group hydrolase's catalyze hydrolysis, the cleavage of substrates by water. Whoa, that doesn't even make a lot of sense to me. Simply said, they are the catalyst that takes larger molecules and breaks them down into smaller fragments. Enzymes within this group are some of the most common enzymes used in products we encounter in our everyday lives.

There is a graphic in the Product Section under the ScentPrevent® tab that is intended to help you see how odor is broken down or eliminated by changing the molecular structure. Sometimes we use this example. H2O is water, a substance you can see and feel. But if you were to change the molecular structure and separate the hydrogen from the oxygen you would have two gases neither of which you could see or feel. It's like you would not even know they were even there anymore. Well, in a general sense that's how Dead Down Winds proprietary

enzyme process works to prevent or eliminate or control odor. We change what was into something different and it involves more than one enzyme or class of enzyme. Some are catalyst causing reactions that change large molecules into smaller ones or fragments of the original odor molecule. Others help prevent certain molecules or bacteria from forming. In applications like Carbon Reactivator a different enzyme and delivery are necessary for optimum results.

The use of enzymes for odor control is prevalent in our everyday lives. They are used extensively to treat septic systems and break down fecal matter in wastewater. Enzymes do their job well enough that most treated water can be released back into the water table after they do their job having changed what was into something else.