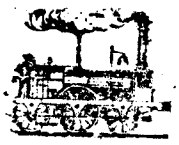
ZetaTalk: Spontaneous Human Combustion



Humans tend to think of fire as occurring at a high temperature, as when the process is going full bore this is indeed the case. But what of the moment when combustion is first starting, when sunlight is warming chemicals or a match is being dragged across a surface? High temperatures are *not* required to start the combustion process, which is but a chemical process, though high temperatures most often result. Many chemical reactions give out heat, a byproduct in excess during the molecular rearrangement. Many combustion processes also occur in a finite or limited manner, and may go unnoticed. A limited combustion process is what keeps the human body at 98.6 degrees, for instance - a slow burn.

Oxygen is present in the blood due to the bellowing action of the lungs, and fats or sugars present from stores in the liver or as a result of digestion. The components for a fire *hotter* than 98.6 are therefore present, but are held in check *only* by the limited supply of oxygen. Damp a fire and its pace becomes controlled. Blow on a fire and it flares. The *pace* of a fire is determined by the availability of its ingredients, and for the slow burn that takes place in the human body, oxygen is one of those ingredients. What would occur, then, if a substitute for oxygen were to become available, along with a catalyst to start the process. Matches start a fire because the heat produced by friction acts as a catalyst for the chemical mix on the head of the match. Where heat is not *required* to start the chemical process known as combustion, oxygen or a similar ingredient is required to keep it going.

That said, what causes spontaneous human combustion, a rare but frightening occurrence.

Beyond what is normally present in the human body - oxygen in limited amounts and fuels - those who spontaneously ignite have inadvertently created their own cremation by fretting and eating, a combination that often occurs. If life feels out of control, then eat. Fat laden foods comfort the most, as comfort from banking against the cold of a long winter or lean times is built into the human animal. The more worry, the more chomping occurs, and under normal circumstances this simply results in obesity. However, worry causes the liver to flood the blood stream with a fine oil, readily lit, in case the body may need to take flight or fight. In some humans a rare genetic condition exists that allows the combustion of this fine oil to continue, unabated, when in combination with a type of adrenaline, the catalyst. The need for oxygen is *bypassed*, as a self-feeding chemical reaction starts where a byproduct of the catalyst- induced combustion incites combustion in neighboring areas, and the matter goes out of control.

These humans, ostensibly fat and even jolly, are invariably found alone in their cremated state. This was a source of their self induced anxiety, as they *chose* to live alone, yet feared being alone, being their own worst enemy on all fronts. Does the human suffer? They feel no pain, as they become unconscious early in the process. A warm feeling, and then all goes black, as the brain is the *first* to receive blood from the pumping heart and brain cells are delicate. The unconscious and rapidly dying body, heart and breathing stopped, progresses to an intense chemical reaction, without oxygen, that is fast, hot, and very limited. The surroundings rarely burn unless highly flammable, as it is over too quickly to heat the air or raise the temperature of flame resistant furniture to the level where combustion runs unabated. Before the advent of flame resistant furnishings, spontaneous human combustion was not recognized for what it is. A spark from the fireplace or perhaps murder were suspected, but all clues were destroyed in the fire.