Supplementary Table 2. Glossary of physiological processes and other terms

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| Term | Definition | Reference |
| adhesion molecule | molecules present on the endothelium, smooth muscle cells, fibroblasts, leukocytes and platelets and which mediate cell–cell and cell-matrix interactions | 1 |
| angiogenesis | development of new blood vessels | 2 |
| atherogenesis | accumulation of lipids and inflammatory cells within the artery wall due to a chronic inflammatory state | 3,4 |
| chronic bronchitis | chronic productive cough for 3 months in each of 2 successive years in a patient in whom othercauses of productive chronic cough have been excluded | 2 |
| bronchoaveolar lavage (BAL) | method for sampling biological fluids from the surface of the lung | 5 |
| chronic obstructivepulmonary disease (COPD) | a preventable and treatable disease characterized by airflow limitation that is not fully reversible; the limitation is usually progressive and is associated with an abnormal inflammatory response of the lungs to noxious particles or gases, primarily caused by cigarette smoking | 2 |
| arrhythmia | loss of rhythm, denoting especially an irregularity of the heartbeat | 6 |
| computed tomography | a special radiographic technique that uses a computer to assimilate multiple X-ray images into a two-dimensional, cross-sectional image, which also can be reconstructed into a three-dimensional image; can reveal many soft-tissue structures not shown by conventional radiography | 6 |
| coronary artery calcification (CAC) | organized, regulated process similar to bone formation that occurs only when other aspects of atherosclerosis are also present | 7 |
| coronary artery calcification (CAC) score | quantification of coronary calcium content most commonly using computed tomography (CT) | 7 |
| C-reactive protein (CRP) | an acute-phase, non-specific, systemic marker of inflammation | 6 |
| type 2 diabetes | diabetes mellitus of a common form that develops especially in adults and most often in obese individuals and that is characterized by hyperglycemia resulting from impaired insulin utilization coupled with the body’s inability to compensate with increased insulin production | 6 |
| DNA adduct | physical complexes formed between reactive chemical species and sites within the DNA molecule | 8 |
| emphysema | permanent enlargement of air spaces distal to the terminal bronchiole, accompanied by the destruction of their walls, and without obvious fibrosis | 2 |
| endothelial dysfunction | imbalance between vasodilating and vasoconstricting substances produced by (or acting on) endothelial cells (ECs) and may participate in the elevation of blood pressure and can play a role in hypertension-related vascular damage | 9 |
| E-selectin | vascular adhesion molecule that mediates the adhesion of neutrophils to activated vascular endothelium | 10 |
| F2-isoprostane | marker of lipid peroxidation | 11 |
| FEV1 | forced expiratory volume in one second; is assessed by spirometry, which measures the volume and flow rate of gas breathed in and out of the lungs with maximal effort and can aid in the diagnosis of COPD and other specific lung disorders, as well as assessment of response to treatment | 12 |
| fibrinogen | major coagulation protein in blood by mass, the precursor of fibrin, and an important determinant of bloodviscosity and platelet aggregation | 13 |
| flow mediated dilation (FMD) | noninvasive assessment of endothelial function in which the increase in arterial diameter, as a consequence of the reactive hyperemia, is compared with the baseline diameter and expressed as a percentage of this baseline diameter | 14 |
| glucose clamp technique | a method for quantifying insulin secretion and resistance in which insulin levels are measured when a constant concentration of glucose is present or vice versa | 15,16 |
| glucose tolerance test | a test to determine the ability of an individual to maintain homeostasis of blood glucose; includes measuring blood glucose levels in a fasting state, and at prescribed intervals before and after oral glucose intake (75 or 100 g) or intravenous infusion (0.5 g/kg) | 17 |
| hemodynamic effects of cigarette smoking | increased myocardial oxygen demand as a consequence of the effects of nicotine stimulating the sympathetic nervous system and the heart | 18 |
| hemoglobin A1c | hemoglobin to which glucose is bound | 6 |
| hypertension | abnormally high arterial blood pressure that is usually indicated by an adult systolic blood pressure of 140 mm Hg or greater or a diastolic blood pressure of 90 mm Hg or greater; can result in thickening and inelasticity of arterial walls and damage to the heart; a risk factor for various pathological conditions or events  | 6 |
| impaired vasodilatation | failure of blood vessels to widen in response to increased blood flow | 19 |
| inflammation | local response to cellular injury that is marked by capillary dilatation, leukocytic infiltration, redness, heat, pain, swelling, or loss of function and that serves as a mechanism initiating the elimination of elimination of foreign substances and for healing damaged tissue | 6 |
| insulin resistence | an organism's inability to respond to and use the insulin it produces; this condition is related to the type 2 diabetes incidence | 6 |
| interleukin-6 (IL-6) | a cytokine not only involved in inflammation and infection responses but also in the regulation of metabolic, regenerative, and neural processes | 20 |
| ischemic cardiac events | an acute coronary event that represents an abrupt transition from stable chronic coronary artery disease to one of the major consequences of ischemia: unstable angina, myocardial infarction, and sudden cardiac death | 11 |
| magnetic resonance imaging | method by which images are created by recording signals generated from the excitation (the gain and loss of energy) of such elements as the hydrogen of water in tissue when placed in a powerful magnetic field and pulsed with radiofrequencies | 6 |
| mode of action | a sequence of key events and processes, starting with interaction of an agent with a cell, proceeding through operational and anatomical changes, and resulting in cancer formation | 21 |
| natriuretic peptides | a set of hormones that are mainly secreted from the heart that are targeted at protecting the cardiovascular system from the effects of volume overload | 22 |
| occupational exposure limit (OEL) | upper limit of an acceptable concentration of a hazardous substance in the workplace environment to prevent potential adverse effects among industrial workers | 23 |
| oxidative stress | disturbance in the balance between production of reactive oxygen species (ROS) and endogenous antioxidant defenses, leading to oxidation of lipids, proteins, and DNA in ways that impair cellular function | 24 |
| omics | scientific disciplines comprising study of related sets of biological molecules; examples of omics disciplines include genomics, transcriptomics, proteomics, metabolomics, and epigenomics | 25 |
| plaques | a well-demarcated yellow area or swelling on the surface of the artery; produced by intimal lipid deposit | 6 |
| platelet | a component of the solid phase of blood critical to the coagulation process | 2 |
| platelet activation | a series of progressive, overlapping events, triggered by exposure of the platelets to subendothelial tissue; these events include shape change, adhesiveness, aggregation, and release reactions; when carried through to completion, these events lead to the formation of a stable hemostatic plug | 26 |
| P-selectin | Vascular adhesion molecule that mediates the adhesion of myeloid cells to activated endothelium and the adhesion of platelets to monocytes and neutrophils | 10 |
| risk assessment | process to estimate the nature and probability of adverse health effects in humans who may be exposed to chemicals in contaminated environmental media, now or in the future | 27 |
| thrombosis | Formation and development of a thrombus or blood clot in the blood vessel | 28 |
| von Willebrand factor | A high molecular weight pro-coagulant product of the endothelium and increased levels are found in atherosclerosis | 29 |

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