Position of the American Heart Association on the Use of Research Animals

A Statement for Health Professionals from a Task Force Appointed by the Board of Directors of the American Heart Association

Rationale

Millions of Americans today are healthy, and other millions are alive, because of advances in the prevention and treatment of heart disease. Death rates from the major forms of heart disease have declined steadily since about mid-century, and the decline is continuing. Most recently, between 1972 and 1982, the death toll from cardiovascular disease declined 28%. The decline is related largely to changes in life style and development of methods of treatment, many of which are based upon animal experimentation. These events encourage medical scientists to believe that most heart attacks, strokes, and hypertension can ultimately be prevented or their onset deferred so that they do not cripple or kill people prematurely.

Effective Prevention and Treatment of disease depends on accurate knowledge about the causes of disease, on information about how disease affects the body, on drugs that combat disease, on devices that work, and on operations that cure. The knowledge, material, and skills on which prevention and treatment are based have come from a wide variety of sources: basic scientific disciplines, such as chemistry, biology, physics, engineering, mathematics, and many others; observation of naturally occurring disease in human and animal populations; and experimentation on human subjects and animals.

Great benefits have resulted from applications of this knowledge, including the heart-lung machine, repair of congenital heart defects, heart valve replacement, cardiopulmonary resuscitation, and the use of drugs to combat hypertension and prevent stroke. Continued progress in the prevention and treatment of heart disease depends on maintaining access to all these sources of knowledge.

Animal experimentation has been challenged as unjustified on both scientific and ethical grounds. Scientifically, there is, as yet, no way to model the extraordinary complexity of the cardiovascular system, which nourishes and interacts with every organ in the body. Generation of new knowledge, testing of new drugs, and the refinement of new devices and operations that affect the cardiovascular system, therefore, require animal experimentation.

Ethically, the main choice is between improvements to human and animal health through animal research vs. restrictions on the use of animals in research, which might cancel our hope for life-saving progress. Confronted with such a choice, we have usually decided that experiments on animals should precede the extending of experiments to human beings.

Despite progress in conquering heart disease, that disease remains the number one killer in America. The American Heart Association, dedicated to improving human welfare by fighting cardiovascular disease, invests funds contributed by the American public in basic research on heart disease. That research, of necessity, involves the use of animals.

The American Heart Association takes the position that the responsible use of animals is essential and necessary to biomedical research and education in the prevention, reduction, and treatment of diseases of the heart and blood vessels.

Assurances of Responsible Use of Animals

The American Heart Association requires assurances of the responsible use of animals in research by requiring the following:

1. AHA grantee institutions must meet standards equivalent to those of the U.S. Public Health Service, including the following categories that pertain to the care and use of animals:

   - **Personnel**
     Care and use of animals is carried out by qualified individuals.
     Supervision is carried out by a veterinarian trained in laboratory animal medicine.

   - **Research**
     Should use alternative methods to live animals when appropriate.
     Should be designed to yield needed information.
     Must use anesthesia for surgical intervention.
     Post-procedural care must minimize or relieve discomfort.
     Should avoid all unnecessary suffering, and must terminate if continuation would result in unnecessary pain or fear.
     Animals must be killed by currently acceptable methods.

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• Facilities and Transportation
  Must be in compliance with current federal, state, and local requirements and guidelines.

2. Grant applications submitted to the AHA or its Affiliates, which propose to use animals, must be reviewed and approved by an institutional Animal Care and Use Committee before review by an AHA Research Review Committee. It is recommended that the Animal Care and Use Committee include a non-scientist and a member of the public. Accreditation by the American Association for Accreditation of Laboratory Animal Care (AAA-LAC) and/or other verifiable assurances must be provided to be certain that the animal facilities, including staffing, meet appropriate standards. The institutional and American Heart Association Research Committees are responsible for determining that the proposed research is necessary, meets ethical considerations, and can be conducted effectively. The principal investigator has the ultimate responsibility for the conduct of research, including the appropriate care and management of the animals throughout the course of the experiments.

3. The “Instructions to Authors” section of all AHA journals should include the following statement. “For experimental animals, state the species, strain, number used, and other pertinent descriptive characteristics. For human subjects or patients, describe their characteristics. When describing surgical procedures on animals, identify the preanesthetic and anesthetic agents used, and state the amount or concentration and the route and frequency of administration for each. Paralytic agents, such as curare or succinylcholine, are not acceptable substitutes for anesthetics. For other invasive procedures on animals, report the analgesic or tranquilizing drugs used; if none were used, provide justification for such exclusion. When reporting studies on unanesthetized animals, or on humans, indicate that the procedures followed were in accordance with institutional guidelines.”
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