How stress conditions may influence... even alter nutritional requirements

Because of the relationships of one nutrient to another, the investigator must be constantly alert for stress conditions which arise during or are created by experiments.

For stress conditions can change the requirements for certain nutrients...shading, over-shadowing, or even distorting the effects of the variable or factor to be studied. Thus, a "chain of events" which adversely influence findings may result.

For example, one effect of an excess amount of fat added to an otherwise balanced diet is to reduce feed intake. This in turn may alter the intake of one or more critical nutrients. In such a case, it would be difficult to attach the proper significance of poor performance per se. Yet the fat without first correcting the deficiency.

What other stresses should we consider that may be related directly or indirectly to nutrient intake? The list seems almost endless. But generally, these stresses can be traced, broken down and classified into four major categories: genetic variation; environmental; disease; and post-operative conditions.

Various diseases may affect nutritional requirements. And of course, the results of specific operative procedures often require special changes in the dietary regime.

Often however, the source or cause of a specific stress is more difficult to identify. Each stress condition will contribute to it, should be considered. To illustrate, an individual’s hormonal system undoubtedly reflects genetic and environmental influences. Any change in these may contribute to variations in dietary requirements. The problem can be further complicated by the fact that there are numerous ways that changes in the hormonal system may alter dietary requirements. Each possibility should be considered and explored.

Many stresses must be controlled by the investigator. A big responsibility indeed. But his job is made much easier with the use of Rockland Diets. For Rockland Diets are formulated to provide a standard source of available nutrients and a balanced intake of these nutrients. Thus, the investigator who uses these diets will find it easier to recognize and control the other factors that may affect the experimental work.

For further information on Rockland standard reference stock diets, see your Rockland Dealer or write: A. E. Staley Mfg. Co., Decatur, Illinois—manufacturers and distributors of:

Rockland Rat Diet (complete)  Rockland Mouse Diet  Rockland Guinea Pig Diet  Rockland Wistar-Rat Diet  Rockland Rabbit Ration  Rockland Rat Diet (D-Free)  Rockland Guinea Pig Diet  Rockland Monkey Diet

INDEX OF ADVERTISERS—19 May 1961

Abrahams Magazine Service  1660
Ace Glass, Inc.  1643
Ainsworth, Wm., & Sons, Inc.  1635
Aldrich Chemical Co.  1660
Allied Chemical Co.  1611, 1613, 1615
Aloe Scientific  1652
American-Edelstaal, Inc.  1637
American-Baker Chemical Co.  1609
American Sterilizer Co.  1517
Aron Electronic Laboratories, Inc.  1617
Applied Physics Corp.  1542
Athon Enzynics, Inc.  1516
Baird-Atomic, Inc.  1510, 1527, 1539, 1605
Baker, J. T., Chemical Co.  1521
Barr & Stroud, Ltd.  1660
Bausch & Lomb Optical Co.  1558
Belloco, Inc.  1624
Bio-Elk Laboratories, Inc.  1650
Brinkmann Instruments, Inc.  1532, 1638
Brookline Scientific, Div. of Will Corp.  1620, 1629
Buchler Instruments, Inc.  1538
Cambridge Instrument Co., Inc.  1641
Canmer's, Inc., Atomic Laboratory  1656
Cargille, R. P., Laboratories, Inc.  1660
Central Scientific Co.  1649
Charles River Breeding Laboratories  1660
Charleston Rubber Co.  1645
Chemical Rubber Co.  1651
Clay-Adams, Cole-Parmer Instrument & Equipment Co.  1628
Coleman Instruments, Inc.  1546
Colorado Serum Co.  1660
Coors Porcelain Co.  1569
Cornelissen, B. J. & Co.  1534
Criterion Manufacturing Co.  1614
Curtiss Wright Corp., Princeton Div.  1629
Despatch Oven Co.  1624
Dietert, Harry W., Co.  1630
Difco Laboratories  1629
Dimco-Gray Co.  1660
Disposable Laboratory Cages, Inc., Div. of Labline, Inc.  1631
du Pont, E. I., de Nemours & Co., Inc.  1632
Eaton-Dikeman Scientific Instruments, Inc.  1551
Edmund Scientific Co.  1533
Electric Hotpack Co.  1626
Edgar's, Inc., Atomic Laboratory  1654
Elgeet Optical Co.  1611
Eli Chemical Co.  1660
EQUITO  1647
Ercorp Co.  1522
Esterline Angus Instrument Co., Inc.  1555
Ex-Cell-O Lab Scale Co.  1616
F & M Scientific Co.  1544
Food and Drug Research Laboratories, Inc.  1660
General Applied Science Laboratories, Inc.  1634
General Biological  1554
Gilmont, Roger, Instruments, Inc.  1530
Gilson Medical Electronics  1643
Graphic Systems  1614
Greiner, Emil, Co.  1534, 1614
Hamilton Co., Inc.  1655
Harvey-Wells Corp.  1523
Heat Systems Co.  1640
Heller, Gerald K., Co.  1644
High Voltage Engineering Corp.  1556
Hitachi, Ltd.  1547
Hoelge Bros., Inc.  1660
Hotpack Research Corp.  1526
Hospital Supply Co.  1660
Houston Instrument Co.  1643
Hyland Laboratories  1639
Industrial Instruments, Inc.  1650
Instruments for Research and Industry  1653
J.K.M Instrument Co., Inc.  1525
Johns-Manville  1512
Kensington Scientific Corp.  1633
Kewaunee Manufacturing Co.  1610
Kepco, Inc.  1624
Kimble Glass Co.  1661
Kirschen Manufacturing Co.  1565
Klett Manufacturing Co.  1637
Knowles Electronics, Inc.  1612
Labline, Inc.  1610
LaPine Scientific Co.  1610
Lauda Instruments, Inc.  1655
Leeds & Northrop  1502
Lindberg Engineering Co.  1618
LKB Instruments Corp.  1553
London Co.  1550
Loudon Equipment Corp.  1657
Maryland Plastics, Inc.  1514
Matheson, Coleman & Bell  1545
Minneapolis-Honeywell Regulator Co.  1540
Mosby, C. V., Co.  1613
Naige Co., Inc.  1622, 1623
National Appliance Co.  1609
National Instrument Laboratories, Inc.  1508
New Brunswick Scientific Co., Inc.  1519
NRC Equipment Corp.  1644
Nuclear-Chicago Corp.  1662
Nuclear Measurements Corp.  1653
Oak Ridge National Lab.  1623
Ohio Chemical & Surgical Equipment Co.  1644
Parr Instrument Co.  1610
Perkin-Elmer Corp.  1504
Pharmacal  1548
Philips & Bird, Inc.  1648
Phoenix Precision Instrument Co.  1656
Photovolt Corp.  1641
Picker X-Ray Corp.  1513
Pilot Chemicals, Inc.  1646
Polaroid Corp.  1549
Precision Scientific Co.  1531
Professional Tape Co., Inc.  1610
Randolph Co.  1659
Raytheon Co.  1627
Reeve Angel  1507
Research Specialties Co.  1608
Riverton Laboratories, Inc.  1660
Rochester Instrument Co.  1511
Sargent, E. H., & Co.  1543
Saunders, W. B., Co.  1503
Scientific Glass Apparatus Co., Inc.  1506
Scientific Industries, Inc.  1659
Sherer-Gillett Co.  1633
Sigma Chemical Co.  1618
Soar, Inc.  1607
Standard Scientific Supply Corp.  1636
Staley, A. E., Manufacturing Co.  1658
Stoelting, C. H., Co.  1609
Stokes, F. J., Corp.  1612
Taconic Farms  1660
Technical Associates  1552
Technicon Chromatography Corp.  1649
Temperature Engineering Corp.  1650
Texas Inbred Mice Co.  1660
Texas Instruments, Inc.  1515
Thermolyne Corp.  1651
Torsion Balance Co.  1509
Tran-Analgesics Corp.  1524
Trans-Sonic, Inc.  1642
U.S. Stoneware  1615
Unilron Instrument Co.  1637
Vanguard Instrument Co.  1528
Vareian Associates  1520
Virtis Co., Inc.  1526
Waring Products Corp.  1541
Wild Heerbrugg Instruments, Inc.  1621
Wilkins-Anderson Co.  1664
Will Corp.  1664
Yellow Springs Instrument Co., Inc.  1650
Zeiss, Carl, Inc.  1518

ROCKLAND DIETS

1658

SCIENCE, VOL. 133