

# Present and Future Products

We are now accepting orders for reasonably early delivery of a wide range of machines designed for both functional testing and proper rehabilitative exercise . . . some of which equipment is now available for almost immediate delivery.

Our current line of equipment consists of two versions of each of seven different machines:

1. Lumbar-Extension Machines
2. Rotary-Torso Machines
3. Abdominal Machines
4. Leg-Extension (Quadriceps) Machines
5. Leg-Curl (Thigh-Biceps) Machines
6. Neck-Extension Machines
7. Rotary-Neck Machines.

The most sophisticated versions of these machines combine all of the required features for accurate, meaningful, isolated and safe testing of muscular function, together with proper rehabilitative exercise for the same muscles.

Less expensive versions of the same seven machines are available for the single purpose of providing proper rehabilitative exercise.

The individual requirements for a particular type of testing machine vary somewhat, depending upon the muscles being tested and the nature of the movement involved; for example, a lumbar-extension machine requires features which permit compensation for both torso-mass centerline variations and magnitude of torso-mass variations . . . whereas, a rotary-torso machine does not require these features, because the movement is a lateral movement and random torque resulting from the torso-mass of the subject is not involved.

In general, all of our equipment includes the following list of functions and features; all of which are absolute requirements for safe, accurate testing procedures and for proper rehabilitative exercise. As mentioned above in the example related to the torso-rotation machine, a few of the machines do not require all of these features; but where they are required, they are provided.

## FUNCTIONS

1. Totally-specific testing
2. Totally-specific exercise, positive & negative
3. Strength testing
4. Endurance testing

5. Work-capacity testing
6. Fiber-type testing
7. Range-of-motion testing
8. Muscular-friction testing
9. Muscle-fiber recruitment testing
10. Negative-only testing
11. Negative-only exercise
12. True-dynamic testing
13. True-dynamic exercise
14. Work measurements
15. Power measurements
16. Measurements of metabolic work
17. Recovery testing
18. Fatigue testing
19. Strength-potential testing
20. Pre-employment screening
21. Stretching
22. Pre-stretching
23. Refutation of false claims
24. Detection of unsuspected or denied injury
25. Type S and Type G testing
26. Effects testing
27. Results testing
28. Apparent-paralysis testing

## FEATURES

1. Automatically variable resistance
2. Direct resistance
3. Balanced resistance
4. Full-range resistance
5. Minimum available resistance 2 & ½ foot-pounds
6. Incremental increases in resistance of 2 ounces
7. Low-velocity resistance
8. Resistance disconnect
9. Zero friction resistance
10. Computer control
11. Visual feedback on computer screen
12. Testing-accuracy above 99 percent
13. Repeatability above 99 percent
14. Efficiency above 99 percent
15. Kinetic energy below 13 percent
16. Axis of rotation alignment 100 percent
17. Torso-mass compensation 100 percent
18. Torso-mass centerline compensation 100 percent
19. Machine-component counterbalancing 100 percent
20. Testing positions within 1 & ½ degrees
21. Range of motion limiting, infinite throughout full range
22. Lowest levels of testing and exercise force
23. Gradual force-application
24. Body-part restraint
25. Digital readout of positions
26. Total pelvic restraint

27. Pelvic-movement indicator
28. Acceleration
29. Machine friction below 1 percent
30. Zero force, entry and exit
31. Body-size variations, (from less than 5 ft to above 7 ft)
32. Unrelated-muscle force removal
33. Undamped test results
34. Meaningful test results
35. Accurate test results
36. Safety . . . Without safety, nothing else matters; our primary concern has been and will be safety. While any form of testing or exercise involves imposing some level of force on the subjects, from as little as two ounces in some of our machines to as much as is desired or required, the highest level of safety can be, and should be, provided; which involves many factors, but primarily means keeping the levels of force as low as possible and under total control.

Every possible safety feature that can be provided in any sort of exercise or testing machine has been incorporated into our machines; they are, quite literally, the safest machines for their intended purposes that can be designed or built.

In the highly unlikely event that we are ever able to improve the safety of our machines as a result of our continuing research, then we will retrofit any and all such features into all of our equipment in service . . . at our expense.

None of the above listed features or functions of our equipment are provided in either a safe or meaningful manner by any other type of equipment in the world . . . nor can they be in the next seventeen years, because they are all covered by our patents pending.

None of our present line of products were offered for sale until we were totally satisfied with them, and we are hard to please; not offered for sale until I was personally convinced that they were far past any chance of functional improvement . . . accurate, meaningful, and safe beyond any slightest chance of improvement. And they are.

Nothing less is acceptable . . . nothing more is even possible.

Any future additions to our present line of equipment will have to meet the same high standards of excellence. No compromise; the field of muscular testing and rehabilitative exercise is far too important to permit even the slightest degree of compromise.

# The Lumbar, The Neck and The Knee

SAFE, SPECIFIC,  
ACCURATE TESTING  
AND PROPER  
REHABILITATIVE  
EXERCISE

By Arthur Jones,  
Chairman  
Medex, Inc.

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Your copy will be mailed prepaid during the last week of January, 1988. Only 50,000 copies of this first edition are being printed, so get your order in the mail as soon as possible. We are NOT soliciting a mailing list and you will not hear from us until and unless you request additional information; this offer is being made in a sincere attempt to alert the medical community to an important breakthrough in testing and exercise.

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#### CHAPTER TITLES

- |   |   |  |
|---|---|--|
| 1—Testing for Work Capacity   | 14—The Basic Considerations for Proper Rehabilitative Exercise                        | 25—The Future of Exercise . . . An Opinion   |
| ✓2—Lumbar Function  | 15—What to Expect from Proper Exercise  | 26—Avoiding and Preventing Injuries  |
| ✓3—The Requirements for Meaningful Testing of Lumbar Function             | ✓16—Injury . . . Cause and Effect   | 27—Increasing Neck Strength . . . For the Prevention of Injury                         |
| ✓4—Three Apparent Levels of Strength                                      | 17—The Advantages and the Problems Related to Various Types of Resistance in Exercise | 28—When in Doubt   |
| 5—The Problems Associated with Most Dynamic Strength Tests                | 18—Response to Exercise of a Typical Type S Subject (A Case Study)                    | 29—Computer Programs   |
| 6—The Advantages of a Static Style of Testing                             | 19—Response to Exercise of a Typical Type G Subject (A Case Study)                    | 30—Charts  |
| 7—Testing Range of Movement   | 20—Testing Work-Capacity with Different Fiber Types                                   | 31—Keep It Simple  |
| ✓8—Testing Strength   | 21—Basic Considerations   | 32—Present and Future Products   |
| 9—Testing for Type S (specific) and Type G (general) Response to Exercise | 22—Research . . . Past, Present and Future  | 33—Dollars and Sense   |
| 10—Testing for Fiber-type Determination                                   | 23—Metabolic Cost of Negative Work  | 34—Twenty Weeks with Twenty Twins (A Case Study) By Edgar Jones, M.D.                  |
| 11—Testing for Recovery Ability (Exercise Tolerance)                      | 24—Flexibility  | 35—Response to Limited-range Exercise (A Case Study) By Mike Pollock, PhD              |
| 12—Testing for False Claims (Lie Detection)                               |   | ✓36—Pre-employment Lumbar Screening  |
| 13—Changing Strength Curves   |   | 37—Seven Years with Lumbar Patients in a Clinical Research Setting, By Mike Fulton, MD |