



*The more specific we are about our moves,  
the more effective our workouts.*



**Increase the intensity of your water workout!**

# WATERGYM® STROKE ANALYSIS CHART

This chart is an intensity-increasing tool created for those needing a more challenging workout. It identifies the qualitative ways that our arms and legs move or "stroke" through the water and how to increase **STROKE** intensity. Every movement or **STROKE** is an opportunity for calorie burning and improving one or more aspects of physical fitness;

- Muscular Strength
- Muscular Endurance
- Flexibility
- Cardiorespiratory Endurance
- Body Composition

| <b>STROKE QUALITIES</b>   | <b>INCREASE INTENSITY BY:</b>  | <b>FITNESS EMPHASIS</b>  | <b>COMMON MISTAKES</b>  |
|---|--|--|---|
| <p><b>SPEED, POWER &amp; FORCE</b></p> <p>Identify how much speed, power and force to exert</p> | <p>Exerting more speed, power &amp; force in a variety of ways including intervals and speed drills</p>      | <ul style="list-style-type: none"> <li>• Muscular Strength</li> <li>• Muscular Endurance</li> <li>• Cardiorespiratory Endurance</li> <li>• Body Composition / Calorie Burning</li> </ul> | <ul style="list-style-type: none"> <li>• Exerting more speed, power &amp; force but shortening levers to minimize drag surfaces</li> <li>• Exerting more speed, power &amp; force but without proper form &amp; technique, increasing risk of injury</li> <li>• No pre-determined intention, diminishing results</li> </ul> |
| <p><b>SURFACE AREA</b></p> <p>Identify where the "drag surfaces" are on limbs</p>               | <p>Feeling the resistance of the water on the maximum surface area of limbs</p>                              | <ul style="list-style-type: none"> <li>• Muscular Strength</li> <li>• Muscular Endurance</li> <li>• Cardiorespiratory Endurance</li> <li>• Body Composition / Calorie Burning</li> </ul> | <ul style="list-style-type: none"> <li>• Not utilizing the maximum surface area possible throughout entire stroke</li> <li>• Slicing versus drag-creating (form drag)</li> <li>• Not feeling the relationship between the different surface areas of the limbs</li> </ul>   |
| <p><b>ROM</b></p> <p>Identify range of motion of limbs</p>                                      | <p>Driving limbs on a clear, concise, pre-determined path, using entire surface area during complete ROM</p> | <ul style="list-style-type: none"> <li>• Muscular Strength</li> <li>• Flexibility</li> </ul>   | <ul style="list-style-type: none"> <li>• Not moving entire limb through full ROM</li> <li>• No awareness of posterior ROM</li> </ul>  |
| <p><b>LEVER</b></p> <p>Identify if lever is fixed or dynamic</p>                                | <p>Maintaining integrity of lever throughout entire stroke whether fixed or dynamic</p>                      | <ul style="list-style-type: none"> <li>• Muscular Strength</li> <li>• Muscular Endurance</li> <li>• Flexibility</li> </ul>   | <ul style="list-style-type: none"> <li>• Angle of lever shortened, minimizing drag surfaces</li> <li>• Integrity of lever not maintained throughout entire stroke</li> </ul>  |
| <p><b>DIRECTION</b></p> <p>Identify which direction to move limbs</p>                           | <p>Driving limbs on a clear, concise, pre-determined path, focusing and feeling specific muscle groups</p>   | <ul style="list-style-type: none"> <li>• Muscular Strength</li> <li>• Muscular Endurance</li> <li>• Flexibility</li> </ul>   | <ul style="list-style-type: none"> <li>• Path direction changes during stroke</li> <li>• Path direction unclear and sloppy</li> <li>• Ignoring beginning or end of stroke</li> </ul>  |
| <p><b>DURATION</b></p> <p>Identify how long to perform each exercise</p>                        | <p>Performing each exercise for an appropriate duration for desired results</p>                              | <ul style="list-style-type: none"> <li>• Muscular Strength</li> <li>• Cardiorespiratory Endurance</li> <li>• Body Composition / Calorie Burning</li> </ul>                               | <ul style="list-style-type: none"> <li>• No pre-determined duration, resulting in performing fewer repetitions than needed to be effective</li> <li>• Duration too long, increasing possible risk of injury &amp; improper form &amp; technique</li> </ul>  |

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