KAATSU AQUA

KAATSU TRAINING

KAATSU-GLOBAL.COM
5 Product Lines
KAATSU Master
KAATSU Nano

KAATSU Air Bands
KAATSU Aqua Bands
KAATSU Instructor Certification
New Form Factor
KAATSU Master
Actual Product Dimensions: 8 inches tall. 6 inches wide. 1.7 inch deep.
Who Uses KAATSU?

* U.S. Ski & Snowboarding Olympic Team including gold medalists
* Japanese gold medalists and professional athletes in various sports
* Chinese Olympic athletes and teams (running + combative sports)
* National-level swimmers at Northshore YMCA Sharks
* Corporate wellness programs
* Competitive masters swimmers
* Swimmers up to the age of 78
* National championship water polo team players
* Professional soccer players coming back from ACL injuries
KAATSU on Dryland
KAATSU on Dryland
KAATSU during Air Travel
KAATSU during Travel
KAATSU during Rehabilitation
KAATSU on Dryland
KAATSU in Water
KAATSU in Water
Ten KAATSU Aqua Principles

1. Do normal workout
2. Finish with KAATSU sets (10 minutes maximum for arms + legs)
3. Swim fast while focusing on technique
4. Do not rest more than 20 seconds between swims
5. Swim fast – focus on 25s, 50s, 75s: GO TO FAILURE
6. Use to improve reaction times and breakouts
7. Start conservatively
8. Use with each stroke, pulling, kicking with fins, paddles, snorkels
9. Ideal for rehabilitation (both in and out of the water)
10. Ideal for travel (when dryland opportunities are limited)
KAATSU Users with Coach Chris Morgan

Carolson Christuk (age 16), KAATSU user since January 2014

Specialty: Breaststroke

Background: Broke his wrist and dislocated his knee cap in 2013

Frequency: Does KAATSU Aqua 3 times per week

Impression: KAATSU Aqua has helped reduce lingering pain

Performance: 200 breaststroke best times
2:14 in September 2013
2:11 in December 2013 (taper meet)
2:09 in February 2014 (unrested and unshaved)
2:03 in April 2014 at YMCA National Championships
KAATSU User with Coach Chris Morgan

Jake Bennett (18), KAATS user since November 2013

Specialty: Freestyle

Background: Had a really bad shoulder (rotator cuff) since summer 2013. Injury flared up under high stress or high volume

Frequency: Currently uses KAATSU Aqua 4 – 5 times per week

Impression: After 2 weeks of KAATSU, pain was almost gone for first time in 3 months

Performance: 200 freestyle best times:
1:44.9 in September 2013 - best time from previous year
1:46.5 in October 2013 with pain
1:44.5 in December 2013 (taper meet, pain free)
1:41.2 in March 2014 (high school state championships)
KAATSU Users with Coach Uros Dzelebdzic

Groups: 16 players in 2 groups for 3 weeks (11 KAATSU sessions)

Test Sets: Everyone did 10 x 50 timed sprint freestyle on 1:15 interval. Two test sets where conducted 3 weeks apart

Workouts: Sets included 25s, 50s and 75s sprint at 120 – 140 mmHg

Results:

<table>
<thead>
<tr>
<th></th>
<th>Pre-test Time</th>
<th>Post-Test Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-users:</td>
<td>32.25</td>
<td>32.23 (first 50 time)</td>
</tr>
<tr>
<td>Users:</td>
<td>31.56</td>
<td>30.32</td>
</tr>
<tr>
<td>Non-users:</td>
<td>33.90</td>
<td>33.77 (average 50 time)</td>
</tr>
<tr>
<td>Users:</td>
<td>33.96</td>
<td>32.38</td>
</tr>
<tr>
<td>Non-users:</td>
<td>34.58</td>
<td>34.13 (average of last five 50s)</td>
</tr>
<tr>
<td>Users:</td>
<td>34.84</td>
<td>32.97</td>
</tr>
</tbody>
</table>

Conclusion: 4% increase in average speed and 5.37% increase in second half of test by KAATSU users
KAATSU for Competitive Swimmers

1. **Technique Focus:**
   10 x 50 focusing on straight hand path and high elbow entry

2. **Race Pace Swims:**
   8 x 50 @ :50 – 1:00
   300 yard warm-down
   12 x 25 @ :30 – :40
   300 yard warm-down

3. **KAATSU with equipment**
   Pull 8 x 50 with hand paddles and snorkels

4. **Starts and Turns:**
   8 x race starts + breakouts
KAATSU for Competitive Water Polo Players

Equipment: 8 sets of arm bands + 8 sets of leg bands for 32 players

Focus: Alternate arm bands + leg bands

Schedule:
Monday: Group 1 (arms): Sprint swim sets
       Group 2 (legs): Eggbeater
Tuesday: Group 1 (legs): Eggbeater
       Group 2 (arms): Sprint swim sets
Wednesday: Group 1 (arms): Shooting
           Group 2 (legs): Kicking
Thursday: Group 1 (legs): Kicking
         Group 2 (arms): Shooting
Friday: Group 1 (arms): Head-up freestyle
      Group 2 (legs): Shooting
Saturday: Group 1 (legs): Shooting
        Group 2 (arms): Head-up freestyle
Is KAATSU Safe?
No Pressure – Normal Resting State

Artery

Capillaries

Veins
Slight pressure in belts, minimal to no effect on blood flow
TOO MUCH PRESSURE

Substantial impediment of arterial and venous flow, hypoxia in capillaries
WAY TOO MUCH PRESSURE

OCCLUDED FLOW of arteries and veins; pale, absent blood in capillaries
OPTIMAL PRESSURE, diminution of arterial flow; beefy red capillaries, distended venous space and impeded flow
### Blood lactate measured by hand-held Lactate Plus

<table>
<thead>
<tr>
<th>treatment</th>
<th>finger</th>
<th>toe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before KAATSU</td>
<td>3.2 mM</td>
<td></td>
</tr>
<tr>
<td>1-2 min after 3 sets each of biceps and triceps; cuffs still on arms</td>
<td>&gt;25 (\Delta = * ) in graph below</td>
<td>1.9</td>
</tr>
<tr>
<td>1-2 min after 3 sets each of calf raises and squats, cuffs still on legs</td>
<td>3.7</td>
<td>7.5</td>
</tr>
<tr>
<td>After 5 min rest with cuffs off</td>
<td>2.4</td>
<td>&lt; 0.3</td>
</tr>
</tbody>
</table>

*Changes seen were larger than comparable trials (left).*

![Graph showing lactate levels](image)

Eur J Appl Physiol, 2005