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The purpose of this handbook is to prepare parents and the swimmers of the City Aquatics Iguanas Swim Club (IGSC) with the team's policies, mission and structure prior to enrollment in the team. The information in this handbook will be updated on a regular basis to keep it current. Parents and swimmers should be aware of its contents, especially the ***code of conduct and team philosophy***.

Club Mission

The mission of City Aquatics Iguanas Swim Club is to introduce novice swimmers to the sport of swimming and develop experienced swimmers to their fullest potential. Community outreach is emphasized and supported by the not-for-profit Friends Of Chicago Youth Swimming. Members are encouraged to develop sportsmanship in addition to their swimming skills. Member families work collectively as a team with emphasis on creating good swimmers and good people outside the pool. Iguanas practice between 2 and 12 hours per week depending on age, experience and goals.

Beliefs:

1. **Fun**-Iguanas have a good time while participating in team events and practice.
2. **Service**- Serving our member families and the community. Offering service projects that the team can participate in.
3. **Differentiation**-Participants should be provided with opportunities to develop their respective capabilities to the fullest extent. These opportunities will take in to account rates of athletic development based on gender, biological age, special needs or learning differences. We will also support athletes who may primarily participate for the social benefits of being on a team and those slow to develop interest in competition.
4. **Safety**-The program should always strive to create a safe environment where children and their families can share a successful and fun athletic experience.
5. **Opportunity**-Providing our swimmers with the opportunity to practice skills and learn teamwork under increasing challenge -providing the opportunity to participate to those that don't have easy access. Offering team-building training trips supported by FOCYS to San Juan, PR or other locations.
6. **Child First**-We will strive to place the “child ahead of the swimmer” believing that in the long term this will create a better experience and a stronger team. We should strive to create an atmosphere where young people can develop confidence, a positive self-concept, a healthy body, an optimistic attitude toward life, and the ability to set goals and work hard to achieve them.
7. **Process**- Our belief is that swimmers may have the best long term experience and opportunity for competitive success if they appreciate and enjoy the process of training and improving, and participating with their team (intrinsic rewards) just as much as winning ribbons and medals and achieving time standards (extrinsic rewards)..

Approach to Practice/Training Philosophy

Our training program and overall approach will be for the long term development of the swimmer. In other words the goal of the program is not to create the highest number of 10 year old state qualifiers possible but rather to give the swimmers the tools they need to be successful and enjoy the sport through the senior and collegiate levels. We understand that competitive success can be important and exciting for early blooming swimmers but consideration must be made for how the approach to meets and practice will affect the swimmer in the long term.

The training program itself will be an I.M. (Individual Medley) based program with equal instructional and training emphasis on the 5 strokes (Free, Back, Fly, Breast and Underwater skills) and plenty of practice and instruction on starts and turns. We understand that many members may be most comfortable in one or two events but want to discourage specialization at a young age. The benefits of an IM based program include

- injury prevention (too much freestyle training has been identified as a source of shoulder injury)
- more variety and fun in practice
- development of better all around strength and athletic ability

Iguanas Group Outline

	Green 1	Green 2	Bronze 1	Bronze 2	Silver	Gold
AGE/Skill	8 and Under Novice	8 and Under Intermediate	9-12 Novice	9-14 Intermediate	11-18 Advanced-Regional/State	14 and Up State-National
YEARS in swimming	1st year	1-3	1st Year	1-3	3 -up	4 -up
RECOMMENDED MEET participation	Home and Inter- Squad	Home, Inter-squad, 1 or 2 invites and Conference Meet.	Home, Inter-squad, up to 1 invite per month and Conference Meet.	Home, Inter-squad, up to 1 invite per month and Conference Meet.	Home, Inter-squad, 2 invites per month and Conference Meet. Regional and State meets	Home, Inter-squad, 2 invites per month and Conference Meet. Senior State, Speedo Sectional , National Meets
PRACTICE duration	1 hour	1 hour	1 1/2 Hour	1 1/2 Hour	1 1/2 -2 Hours	2 Hour
PRACTICES/ Week	1-2	2-3	2-4	2-4	4-5	5-6
INSTRUCTIONAL	75%	50%	50%	25-50%	25%	20%
DRILL PROGRESSION	1	1,2	2,3	2,3	2,3,4	2,3,4
YARDAGE/ practice	250- 750	750-2000	1000-2000	2000-4000	3000-5500	3500-7000
DRYLAND	Deck drills for stroke demonstration	Deck drills for stroke demonstration	Deck drills	2x 15 m min/week body weight and core	2x 20min/week aerobic weight bearing and core	3x 30 min/week aerobic weight bearing and core
RECOMMENDED SPRING/SUMMER TRAINING	N/A	2-3 Practices Other Sports	2-4 Practices/week, 1 or 2 meets Other Sports	2-4 Practices/week, 1 or 2 meets Other Sports	4-6 Practices/week or 1 meet/month	6-11 practices/week 1 meet/month Dryland
2010-2011 #s Membership	20	9	37	30	30	N/A

Administrative Structure

City Aquatics Iguanas Swim Club, Inc. is a coach owned and parent supported (through the non-profit Friends of Chicago Youth Swimming or FOCYS) organization. Decisions regarding team activities and budgeting and are made cooperatively between the coaching staff and FOCYS. Parents are encouraged to participate in the planning of activities related to the team and volunteers are always needed for meets and fund raising.



Training Facilities

Lakeshore Athletic -1320 W Fullerton (for advanced east side swimmers)
St. Patrick High School -5900 W Belmont enter pool directly from Austin Ave
McCormick Boys and Girls Club - 4835 N. Sheridan
Truman College -1135 W Wilson Ave

We are happy to offer both locations for the convenience of our members. We are in negotiations to re-open Truman College as our “home pool” where we conduct our home meets and special clinics and get together/family swims. ***Please note we are guests at these pools and are usually under a short term contract-*** we implore all members and families to respect these institutions at all times by following the rules of the facilities, respecting security personnel and helping to keep them clean. **There should be no food or drink on the pool deck or locker rooms of either facility other than water/gatorade for practice.**

Always lock up valuables (bring a lock) or keep them on deck. When attending any practice please come dressed already in suit and bring change of clothes in swim bag

Staff

Head Coach	Lance Grossman 773.316.8348 l.gross7000@yahoo.com
Age Group Swimming Novice Level	John Sencion johnjr1@sbcglobal.net
Age Group Swimming Advanced Levels	Tahira Aleg
Senior Coach St Pats	Erik Nyholm enyholm@slidematicproducts.com
Age Group St Pats	Meztli Gonzalez, Debbie McNulty
Senior Coach East	Tim Ruppe
Age Group Staff East	Anna Fiorentino, Katie Gonzalez
Billing	Mary Beaudry beaudry_mary@hotmail.com
FOCYS Boosters/Parent Volunteering	Kim Boettcher kim@prpertsolutionschicago.com

Coaching Responsibilities

We ask our coaches to provide individual support for all team members in addition to running practices. They are asked to be available 15 Minutes before and after practice for parent questions. They are responsible to note a members' attendance and evaluate each swimmer in their training group based on our stroke and drill progression twice a year. - parents are welcome to view and discuss it with their coach .

Please remember we welcome parent input at any time but in matters related to coaching the staff has the final authority.

- The coaches are responsible for placing Iguanas in practice groups. This is based on the age and ability of each individual. When it is in the best interest of a swimmer, she/he will be placed in a more challenging training group by the coach. ***In keeping with the philosophy of the team we prefer to group swimmers by age and gender as much as possible.***
- Sole responsibility for stroke instruction and the training regimen rest with the Iguanas coaching staff.

- Parents choose meets online through our meet sign-up system. The coaching staff will make the final decision concerning which meets the IGSC swimmers may attend (when it comes to end of year championship meets). The coaching staff also makes the final decision concerning which events a swimmer is entered into.
- At meets, the coaching staff will conduct and supervise warm-up procedures for the team. After each race, the coaches will offer constructive criticism regarding the swimmer's performance. (It is the parent's job to offer love and understanding regardless of their youngster's performance.)
- The building of a relay team is the sole responsibility of the coaching staff.

Code of Conduct and Discipline

Iguanas and their families at all times will support their teammates and respect the staff and facilities we use.

- Older members are expected to welcome new team members and assist younger and newer members.
- Never interfere with the progress of another swimmer during practice or otherwise or violate any general safety procedures.
- At all IGSC functions (practices, meets, social gatherings) we expect each swimmer to behave in such a way that their actions reflect positively on the team.
- All members of the IGSC (parents and swimmers) continue to protect and improve the excellent reputation the IGSC maintains.

Disciplinary procedure: 1. Warning and family notified. 2. 1 week suspension (including meet). Meeting with Head Coach before re-entry. 3. Expulsion without refund.

Practice and Attendance Policies

1. Swimmers must be registered with the IGSC and have at least a minimum of fees paid prior to practice. **We do offer a grace period to new swimmers that would like to come in and try the team.** In Families in need of help registering or fee waivers contact the Head Coach.
2. Swimmers should arrive a minimum of 15 minutes before practice so as to be on deck and ready 10 minutes before practice starts. This is time to stretch and spend some social time with teammates. Also, this allows us to start on time and make efficient use of the allocated time. **They should always have 2 pairs of goggles with them and their training fins. Both can be bought on the teams website.**
3. Swimmers should be picked up no later than 15 minutes after practice.
4. For the swimmer's protection, parents should make sure a coach is at practice and that there is practice, before leaving their child at the pool. Check with the team's website regularly for changes. www.iguanaswimming.org
5. The swimmer should plan to stay the entire practice. The last part of practice is often the most important. Also, announcements are usually made at the end of practice.
6. Parents **are** allowed on the pool deck during practice, but please respect our need for a good instructional environment.
7. **Swimmers should always wear their suits to the pool and then change into dry clothes after.**

8. While at practice, the swimmer is the responsibility of the coaching staff. During practice sessions, swimmers are never to leave the pool area without a coach's permission.
9. If a swimmer is late to practice or has to leave early, we ask that the coach is notified prior to the start of practice.
10. The coach should be notified in advance of an illness or injury. Regardless of how serious or trivial it may be. If your swimmer will be out of the water over a long period of time with an injury or illness, please notify the Head Coach.

Communication/Meet Sign-Up

IGSC relies primarily on the website www.iguanaswimming.org and group emails. We also provide newsletters and calendars whenever possible. The team phone # is currently **773.316.8348**.

All swimmers and families should plan on attending our major home meets/fundraisers: the Uptown Invite at Truman the 2nd Saturday of December and the Iguana Invite at UIC on the third Sunday of January (MLK holiday weekend).

Signing up for meets is accomplished on the website. The schedule and sign-up will be posted by 9/14.

A family *confirms their swimmers entry* in the meet by checking the “entry-list” page on the website prior to the meet. Here the swimmer will be able to see what events they are swimming in.

Swimmers will not be entered in meets until a minimum of fees are paid. Families should choose a combination of dual and invitational meets. Newer swimmers in particular will enjoy our home meets. Please note that sign-up for Invitational meets closes 3 weeks prior to the meet. A swimmer need not attend every meet or both days of a 2 day meet. Questions regarding meets can be answered at the September 19th parent meeting.

Other important info resources:

Pool Bulletin Boards: There is a bulletin board at each pool that is updated with the current and meet results.

1. **Team Roster/Directory:** A team directory will be provided on the IGSC web site and distributed at the pools as soon as possible for use in coordinating carpools, fund raising mailings, and volunteer assignment changes. The information is used only within the team and is not authorized for any other use.
2. **Coaches:** The best way to speak with the coaches is to meet them after practice. They usually make themselves available for 15 minutes to answer questions and provide information. Sending a note to the coach with your swimmer is a good way to get information to them.

Team Attire

The IGSC uses the team store on our website which offers wholesale prices-make sure you are logged in and then click on the "GET OUT SWIM". Its a good idea to purchase a grab bag suit for practice and the required team suit for meets.

Team suits are required for each swimmer competing in our meets! **Team caps (the black one only) for those wearing caps in meets (no high school or novelty caps at meets) .** There will be no "fastskins" suits worn during the regular season.

All swimmers will receive a team t-shirt at SWIMATHON on October 4th-6th . This will also be a deck attire requirement. The swimathon will also give them an opportunity to earn a variety of other gear!!

Volunteering

With the exception of our professional coaches and the IGSC is a volunteer organization. The club's success is directly dependent of the commitment of all its members. Therefore, parents are encouraged to donate time and services to help in various aspects of team operations.

Each meet that we host will have a detailed list of jobs that you can sign up for on the website.

Areas that parents can help:

Concessions! -at the September parent meeting and in emails we'll be looking for delicious donations and help selling the delectables at the stand.

Set-Up and Clean-Up- everyone likes to get home after a meet but if we have more help in these areas it will greatly benefit the team.

Officiating-Any parent can become an official-its the best view of the meet. IGSC will even pay for your expenses in becoming an official.

Bullpen- helping keep the kids (esp younger ones) organized before the races.

Computer Scorers table- Where we collect times and score the meet.

Development-working to get sponsors for the team and building relationships in the community.

Newsletter/bulletin boards and calendar- help the coaches/FOCYS provide communications

Volunteering at away meets may be *required* at times (to help find swimmers, bullpen..etc

Fundraising- in 2011 we provided over \$13,000 in fee discounts

Our SWIMATHON should help us cover this outlay which is expected to be greater in 2012-13

Our other major fund raiser for the IGSC is our hosted swim meets- the Iguana Invite and Uptown Invite.

The Swim Season/Types of Meets

Iguanas compete in the Windy City Swim Conference. The swim season is divided into two seasons. The Fall/Winter or "short course" season runs from mid-September to the end of February. The meets are held in a 25 yard/meter pool. The Spring/Summer or "long course" season runs from early April to the end of July. Most competitions are held in 50 meter pools. Many Iguanas also participate on the Lincolnwood Lightning summer team and Iguanas Triathlon Club.

DUAL/TRI MEETS:

IGSC will compete with one/two other teams in a dual meet. These meets help promote team unity and provides a great atmosphere for the new swimmer. There is usually a limit on the # of events a swimmer will swim. These are free meets. We like the full team to attend.

- **HOSTED MEETS (Iguana Relay Meet/Iguana Invite/Uptown Invite):** These meets are hosted by the IGSC and there is no qualification time standard in order to compete. All IGSC swimmers are encouraged to participate. Each swimmer is usually allowed to enter 3-5 events per day.
- **INVITATIONAL MEETS** Locally hosted meets that require fees for each event/session swum in. For most anyone is eligible-unless noted on the meet sign-up form.
- **WINDY CITY CONFERENCE CHAMPIONSHIP MEETS:** All swimmers with regular attendance can be eligible and can use this meet to qualify for regional/state meets.
- **REGIONAL/STATE CHAMPIONSHIPS:** At the end of each short and long course season (March and July), a State Championship meet is held by Illinois Swimming. IL Swimming sets the qualifying time standards for these meets. There are 3 championships held each season.
 - Age Group Championship: This is held for swimmers 14 and under
 - Senior Championship: Open for any swimmer making the qualifying Senior time
 - Regional Championship: Held in short course only for the swimmer making IL Regional Time Standards
- **ZONE CHAMPIONSHIPS:** After the state championships are held in the summer, a swimmer may qualify to participate in the Zones by making the IL Zone Time Standard. The is an all-star meet, in which the swimmer competes against other states from the Midwest.
- **SPEEDO/USA SECTIONALS:** One of the highest levels of achievement IGSC swimmers strive for is the participation in the Sectionals. Swimmers meeting qualifying time standards

for this meet travel to different locations throughout Central USA to compete against the best swimmers in the nation.

- **NATIONAL CHAMPIONSHIPS:** Other than the Olympic Trials and the World Championships, the highest level of competition for our senior swimmers is the National Championships. Swimmers meeting the National Qualifying Time Standards at Zones, travel to various cities throughout the USA to compete against America's best swimmers.
- **JUNIOR NATIONALS:** The Junior Nationals are held in the short course season for 18 and Under swimmers. To qualify the swimmer is usually in the top 12 in the State of Illinois..
- **JUNIOR CHAMPIONSHIPS:** The Junior Championships are held in the long course season.

Awards Banquet

In the Fall/Winter season, the banquet normally takes place in April hosted by FOCYS where each participant is honored and receives a trophy and gifts. We always welcome help in organizing the banquet.

Meet Information-how they work, etc.

What to bring

1. Most important: Team swim suit, team cap, and goggles. Having an extra swim suit and pair of goggles is a good idea.
2. Towels: Realize your swimmer will be there awhile, so pack at least two (or pack as many as he/she has events).
3. Something to sit on: Often times the swimmer area may be located in a gym or Cafeteria. Examples: waterproof picnic blankets or sleeping bags.
4. Sweat Suits or Team apparel to wear between events.
5. Team T-shirts: Pack 2-3 in case one gets wet.
6. Games: Travel games, cards, etc. to pass the time
7. Food: Bring some healthy snacks. Concessions are available at meets, but sometimes the lines are long and junk food is sold. Examples: Water, Water, and Water!!, fun fruits, granola bars, cereal.
8. Flip-flops or Crocs: He/she should wear something on their feet when walking around the pool deck or outside in hallways.

Before the Meet starts:

1. On the "entry list" site of our website, you will find your swimmer's event number, event, distance, and stroke. Example: #22 50 Free. **Write all the swimmer's events on his/her hand prior to coming to the meet with a permanent marker.** This helps the swimmer remember what events he/she is swimming and what events to listen out for.
2. Arrive at the pool at least 15 minutes before the scheduled warm-up time begins. This time will be listed in the meet packet posted on the website or in the H2O Log.

3. Find Positive Check-In. Most **invitational** meets require the swimmer to check in. There is usually a table set up near the entrance. Check for instructions. You will be asked to highlight the swimmers name and events. A swimmer who misses Positive Check-In will not be allowed to participate in the meet. Check-in usually closes 20 minutes after warm-ups begin. A swimmer cannot scratch him/herself from an event unless he/she has their Coach`s approval.
4. Put on his/her cap and goggles and report to the pool for warm-ups to hear any instructions from the coach.
5. After warm-ups, your swimmer will get his/her towel and wait until their first event is called. This is a good time to make sure he/she goes to the bathroom, if necessary, gets a drink or just gets settled in.
6. The meet usually starts about 10-15 minutes after warm-ups end.
7. According to the USA Swimming rules (because of insurance reasons), parents are not allowed on deck unless they are serving in an official capacity.
8. Psych Sheets: A psych sheet is usually available for sale in the lobby or concession area of the pool. A psych sheet lists all the swimmers in each event in order of "seed time". When the team entry is sent in, each swimmer and his/her previous best time in that event is listed. If the swimmer is swimming a particular event for the first time, the swimmer will be listed as a "no time" or "NT". A no time swimmer will most likely swim in one of the first heats of the event. A heat sheet may be available close to the start of the meet that lists the actual heat and lane a swimmer will be competing in for a small fee.
9. Relays are decided upon by the coaching staff.

Meet Starts

1. It is important for any swimmer to know what event number he/she is swimming (again, that is why the swimmer should have the event numbers written on their hand). He/she may swim right away after warm-ups or have to wait awhile.
2. A swimmer`s event number will be called over the loudspeaker, and he/she will be asked to report to the starting blocks or 'bullpen' which is a staging area. Example: "Event #1, 8 & Under girls 25 yard freestyle please report to the bullpen". The bullpen volunteers will line up the swimmers and take them to the starting blocks. At some meets, there is no bullpen and the swimmer must get him/herself to the starting blocks on time.
3. The swimmer swims the race.
4. After each swim:
 - the swimmer should then go immediately to their coach. The coach will ask him/her their time and discuss the swim with the swimmer.
 - generally, the coach follows these guidelines when discussing swims.
 - positive comment or praise
 - suggestions for improvement
 - positive comments
5. Things you can do as a parent after each swim: Tell your swimmer how great they did!! The coaching staff will be sure to discuss stroke technique with them. You need to tell them how proud you are of them. This is another good time to check out the bathrooms, get drinks or

something light to eat. And of course, to cheer on the other IGSC swimmers. The swimmer will now wait for his/her next event.

6. When a swimmer has completed all his/her events, there is one more thing to be done before the swimmer can go home. Check with the coach to see if your swimmer is in a relay.



Fee Structure and Registering

The Swim season runs between September and March. Fees cover the training for the entire season and include the \$60 USA Swimming membership. *The initial registration fee is \$250.* Families can choose to pay in full at the beginning of season or make a payment and 2 more installments. Please note: Swimmers participate in home meets for no additional cost, however participation in away meets requires additional fees.

ROSTER GROUPS AND FEES

8 and Under, Fee is \$440: range from 5 year olds just learning to get across the pool to competitive swimmers attending multiple meets. At this age we recommend a maximum of three practices a week . Swimmers are assigned to Green Basic group or Green Intermediate group.

Age Group, Fee is \$500: range from 9 year olds that swim once or twice a week and have little or no swim team experience to regional and state qualifiers that have been on the team for years. Swimmers and families choose their practices based on age, ability and goals. Swimmers are assigned to Bronze Basic, Bronze Intermediate or Silver Group.

Senior , Fee is \$180 (boys) and \$290 (girls): high school age swimmers that are conditioning for water polo or off their high school season to stay in shape, also the competitive swimmer to state or national qualifier-swimming is usually their primary sport and they are pursuing focused training to improve their competitive results and will participate in home and away meets. Swimmers are assigned to Bronze Intermediate thru Gold groups.

Note that second family members receive \$50 off and 3rd and 4th receive \$100 off.

Fee Assistance

We will make every effort to accommodate any family as long as they pay the agreed fees promptly or communicate with us regarding any changing finances that may affect their ability to pay.

The Iguanas are proud to offer fee assistance to families who provide evidence of low income (a school free lunch form or tax return) to us. You must mail in this form within 1 week of the beginning of fall season or bring it to the parent meeting. If you mail it it must go to the address below:

Iguanas c/o Kim Boettcher 4308 N. Lowell Chicago, IL 60641

Fee Assisted Team Fees are \$150 for High School Boys and \$250 for all other age groups and swimmers.

Note that with fee assistance, second family members receive \$25 off and 3rd and 4th receive \$50 off.

REFUND POLICY: Refunds will be considered only for illness or family emergency.

Parents Resources

We hope to provide additional articles of interest to parents throughout the season on www.iguanaswimming.org and on the pool bulletin boards.

Here are some websites for more information:

Illinois Swimming: www.ilswim.org

USA Swimming: www.usaswimming.org

Swimming World: www.swiminfo.com

Swim News: www.swimnews.com

International Swimming Hall of Fame: www.ishof.org

Suggested Reading for Swim Parents:

The Parent's Guide to Competitive Swimming

By: Fred Cruciger

The Swim Parent's Newsletter (will be available on www.iguanaswimming.org)

By The American Swimming Coaches Association

1 Hall of Fame Drive

Fort Lauderdale, FL 33316

Parent, Coach, and Athlete

By Ronald E Smith, Frank L Small, Nathan J Smith

AAHPERD Publications

PO Box 704

Waldorf, MD 20604

The Parent's Guide to the Proper Care and Feeding of the Competitive Swimmer

By Dr. Keith Bell

The Swim to Win Playbook

By Dr. Keith Bell

You Only Feel Wet When You're Out of the Water

By Dr. Keith Bell

Winning Isn't Normal

By Dr. Keith Bell

The Nuts and Bolts of Psychology for Swimmers

By Dr. Keith Bell

Keel Publications

PO Box 160155

Austin, TX 78716

Nutrition for Swimmers

From www.usaswimming.org -

Six 200's descending on five minutes. Twenty-five 50's on :58. Whatever your "favorite," every set during every workout and dryland session requires energy.

Nutrients are the "chemicals" that supply the body with energy. Carbohydrate, protein and fat supply energy in the form of calories. These are your "Energy-Yielding Nutrients." Vitamins, Minerals and Water don't supply energy in the form of calories, but their presence is required in order for the body to access the energy provided by carbohydrate, protein and fat.

During exercise, the body gets its energy primarily from carbohydrate and fat. It likes to save protein for other things (building and repairing muscle tissue, hormones and red blood cells, and supporting the immune system). The only time the body uses protein as an energy source during exercise is when carbohydrate and fat are not present in sufficient quantities. This happens when the total caloric intake is too low over a period of months, and or the bout of exercise is so long that the body's accessible sources of carbohydrate and protein become exhausted. Neither of these scenarios is desirable for swimmers.

Think about money. When you have lots of it, you don't mind paying full price for things. But when money is scarce, or there is just too much you have to buy, you look for bargains. You're not being cheap, just thrifty. Simplified to some extent, your body knows how to shop.

Now instead of dollars, think of your currency as oxygen. When swimming is "easy," say during warm-up or your easiest sets, there is plenty of oxygen available to support the exercise. The body perceives

itself as “rich” and doesn’t mind splurging on fat (1 gram of fat costs 9 oxygens). In fact, it automatically does so because it knows it might need carbohydrate at a later time.

When exercise is hard (we’re talking tough sets, definitely your hardest sets), oxygen is not plentiful. In fact, the body needs every bit it can get to support the exercise, but even that is often not enough, and the body is forced to derive energy in ways that do not require oxygen (i.e. anaerobic metabolism). In this situation, the body perceives itself as very “poor” and becomes very thrifty with its “purchase” of fuel. Since carbohydrate costs less than fat (1 gram of carbohydrate costs 4 oxygens), the body chooses to rely primarily on carbohydrate for its energy.

Keep in mind that this entire fuel burning process is never a case of “all or none.” In other words, the body is always using some combination of carbohydrate and fat, but the intensity of the exercise dictates which fuel source will be the dominant one. When swimming is easiest, fat is the primary fuel source. When swimming is toughest, carbohydrate is the primary fuel source. When swimming is about 50% of maximum effort, carbohydrate and fat contribute about equally.

Let’s face it – the majority of workouts are hard. Above 50% for certain. If you consider the typical swim workout, it’s pretty safe to say that the primary fuel source for swimmers is carbohydrate. The following recommendations will help you stay on the right path:

The Right Kinds of Carbs

Make sure that the bulk of your diet comes from complex carbohydrate sources (approximately 50-60% of your total caloric intake). It's important that these carbs are predominantly in the form of whole grain breads and cereals, whole wheat pasta, brown rice, yams (or sweet potatoes) and beans. Try to stay away from white pasta, rice, breads and bagels as much as possible. They have an unfavorable effect on blood sugar levels and can really hamper your performance.

Protein Intake

Try to opt for quality, low-fat protein sources like skinless, white meat chicken and turkey, lean beef, eggs, tuna, flounder, sole and cod, skim and low fat milks, low-fat yogurt (not the "fruit on the bottom kind") and tofu. Limit your intake of high-fat cuts of beef and pork, hot dogs, chicken nuggets, fried chicken and pretty much all fast food, as much as possible. Proteins should make up anywhere between 20-25% of your total caloric intake.

Watch the Fat

Keep an eye on your fat intake. As a general rule, try to limit your intake of saturated fats, or any type of "hydrogenated oils" and "trans" fats. You can do this by cutting down on higher-fat cuts of beef and pork and all types of fast food. Also try to read as many nutrition labels as possible, as most clearly list the breakdown of both total fat, and saturated fats. Make sure that any food you choose has no more than 3 grams of fat per every 100 calories (i.e. in a 200 calorie food, 6 grams of fat is the limit), and that no more than about 1/3 of the total fat comes from saturated fat. So, that same 200 calorie food with 6 grams of total fat should have no more than 2 grams of saturated fat. Overall, fats should comprise anywhere from 15-20% of your total caloric intake.

Don't Forget Fruits and Vegetables

Eat as many fresh vegetables and fruits as you possibly can. Most kids fall way short of the recommended 5-9 daily servings of fruits and vegetables. They provide tons of vitamins and minerals, as well as much needed fiber.

Hydrate!

Proper hydration is absolutely key! You can't drink next to nothing for several days and think that jumbo Powerade you're swigging in the car on the way to the pool is going to do anything. Here's a breakdown of how much you should be drinking and when:

Overall water consumption for kids age 9 to 13 should be 2.0 to 2.5 liters per day, whereas 14-18 year-olds should strive for 2.5 to 3.5 liters, with girls falling near the lower end of the range, and boys at the higher end. Keep in mind, we're talking about water here, not juices, sports drinks, or soda. This should be your target for each and every day, with your fluid requirements increasing with athletic activity.

Sports drinks are really only necessary for activities lasting at least one hour in duration, but can otherwise be consumed in moderation if they encourage young athletes to drink. Watch the sugar content, though. When choosing a sports drink, look for one with a 6-8% carbohydrate concentration, or 50-80 calories per 8 ounces, with 120-170 milligrams of sodium.

Provided that you've adhered to the guidelines listed above, there are a couple of steps you can take the day of the meet to help make sure that you perform at your best:

Meet Day-Eat Breakfast!

Start out with a proper breakfast. This does not entail grabbing a bagel with cream cheese and eating it in the car with a large orange juice on the way there. The bagel, especially if it's made with white flour can really jack up your blood sugar levels. Granted, the fat in the cream cheese will blunt this affect somewhat, but add in the OJ and you'll be all fired up for warm-ups and likely crash shortly thereafter.

The best-case scenario is to sit down and eat some slow cooked oatmeal (prepared the night before) with fruit, or some eggs and whole grain toast, or whole grain cereal with skim, or low fat milk. If it's an early meet and you must eat on the run, at least make it a whole grain bagel with peanut butter, as the these two foods together make up what is known as a complete protein by providing your body with all the essential amino acids it needs. Trade in the OJ for a lower sugar sports drink and you're good to go. Some more foods to stay away from include bacon, sausage, croissants, doughnuts and sugary breakfast cereals.

As far as what you should have in your bag for snacking, I think the best way to address this is with a list of what you should bring, vs. what you should not bring.

What to Bring to a Meet:

1. At least 32 oz. of water to drink during and after the meet.
2. No more than 16-20 oz. of sports drinks that meet the above criteria.
3. Energy bars: Try to stick with bars that have less than 10 grams of fat, and less than 35% of their calories from sugar (the lower the better). To calculate this: multiply the number of grams of sugar by 4 and then divide that number into the total calories. Some recommended brands include: Kashi TLC

Bars, and Odwalla Bars.

4. Whole grain pretzels, crackers and cereals.

5. Nuts, seeds and dried fruit (in limited quantity due to the relatively high sugar content).

6. Lower Sugar Fruits: Strawberries, Apples, Cantaloupe, Blueberries, Raspberries and peaches.

What not to bring, or bring less of:

1. Chips of any type. Most are loaded with fat and calories.

2. Goldfish, Cheese Nips, or any other types of crackers made with white, enriched flour.

3. White Bagels and Breads.

4. High Sugar Fruits: Banans, Raisins, Pineapple and Grapes.

5. High Sugar Energy Bars: Many types of Power Bars fall into this category.

6. Fruit Juices of any type: Too high in sugar and don't clear the gut as rapidly as sports drinks, possibly leading to stomach cramping.

7. Soda. This one's an absolute no-no!

8. Cookies, candy, gummy bears, or anything else along those lines