

Hands Only CPR Teaching Information Packet



This packet has been put together by Children's Healthcare of Atlanta, to give you easy access to more information about teaching Hands Only CPR to students in Georgia schools.

If you have questions or need more information on the "how to's", please contact Alison Ellison or Richard Lamphier at Project S.A.V.E. at Children's Healthcare of Atlanta at 404-785-7201, Alison.ellison@choa.org or Richard.lamphier@choa.org .

We hope you have fun teaching this class, and knowing that you are making your whole community more heartsafe.

Included here:

1. Resources for Teaching
2. Manikins, AED trainers and Supplies
3. Website Resources
4. Hands Only CPR class outline/ideas
5. CPR Pre-test and Post-test
6. AED Teaching Information
7. Frequently Asked Questions in CPR class

Resources for Teaching Hands Only CPR:

DVDs and video clips:

American Heart Association: Family and Friends DVD /\$29.99. Adult CPR section is Hands Only CPR, includes practice sessions that can be easily replayed for all to practice. (dvd also includes child and infant CPR and Choking which do not have to be covered in this class.) This DVD can be ordered at any of these 3 websites for same price, and comes with a facilitator guide:

1. www.channing-bete.com/aha

<http://shop.aha.channing-bete.com/onlinestore/store.html?cid=134631> (Item 90-1033)

2. www.laerdahl.com

<http://www.laerdal.com/us/doc/1096/Family-Friends-CPR>

www.eworldpoint.com

<http://www.eworldpoint.com/en/Products/American-Heart-Association/Heartsaver-Lay-Rescuer/>

CPR Anytime Kits:

Kit is made for home use, but comes with one inflatable manikin and a dvd that covers Hands Only CPR for the adult as well as full CPR for the child. /\$34.95

www.cpranytime.org

Free You-Tube downloads to supplement your class:

www.redcross.org/prepare/hands-only-cpr (American Red Cross: simple/clear 2min 14 sec)

<http://www.youtube.com/watch?v=zlbSWgrfQ0o> (rap 2 min 36 sec)

<http://www.youtube.com/watch?v=Re1S2j--N7Y&feature=youtu-be>
(rap—2 min 14 sec)

<http://www.youtube.com/watch?v=GMjXrFig7M4> (2 min 48 sec)

<http://www.youtube.com/watch?v=yNHIC1aaCz8> (9 min 55 sec) (CPR and AED Use for Schools Part 1)

<http://www.youtube.com/watch?v=NTS5r1IIVao> (6 min 54 sec) (CPR and AED Use for Schools Part 2)

<http://www.youtube.com/watch?v=912qx-MMwsl> (6 min 45 sec. Hands Only CPR)

<http://www.youtube.com/watch?v=SX8VfIRSo2o> (5.00 min with Sanjay Gupta and Matthew McConaughey)

<http://www.youtube.com/watch?v=EcbgpiKyUbs> (6.00 min—Sarver Heart Institute, AZ)

<http://www.youtube.com/watch?v=2J-oSj5lkEY> (1 min 9 sec---AHA)

http://www.youtube.com/watch?v=3trpw_We0UQ (2 min 14 sec. AED training)

Manikins, AED trainers and Supplies:

There are several options for teaching CPR and giving students some hands on experience with compressions and the AED.

The most basic thing that people have used that gives students some experience with how to do a good compression is to use a large (~3 inches “deep” car sponge. I have also read about a Citizen CPR Compression Trainer, but have not been able to find it on the internet or anywhere else yet.

CPR manikins offer the advantage of giving the student an idea of where to place their hands, a more realistic simulation, as well as what a good compression feels like. There are several brands available, and you may have some in your school if there is Health Sciences curriculum. Most of the school health or school sports catalogs will have CPR manikins, as do the three places listed above for ordering the AHA DVD.

Prices vary from \$335 (Simulaids) to \$485 (Prestans) for a 4 pack of manikins to \$435 for a 5 pack (CPR Prompt). (These 3 are all in the

School Health catalogs/website www.schoolhealth.com and www.schoolnursesupply.com) The Aktar brand 10 pack can be purchased from Armstrong Medical for ~ \$650.

These are a little more labor intensive to put together, but are very light. Most of these can also be purchased individually. All come with some lungs, but you would not need to use or replace these if you are teaching Hands Only CPR.

The Prestan manikin (with CPR monitor) is the only one that offers CPR monitor lights that show the student and the instructor when they are pushing hard enough and fast enough, and 2 green lights come on. These make teaching much easier, but it can certainly be done well with any of these options.

The way a class usually runs using the AHA DVD, you could give each student in a group of 25-30 a good experience with compressions with only 4 manikins in 30 minutes or so. And manikins could certainly be moved from school to school, as the teaching schedule allows. More manikins just makes it go quicker.

Manikins should be cleaned after each class before being packed away, using Clorox wipes or whatever surface-wipe the school uses.

AED Trainers:

The most economical way to have a trainer that students can get an experience with is to download one to an IPAD, or another device like this. New ones come out all the time, so I would go to the app store and look up AED trainers. There is one from IVOR Medical that works well on the IPAD and is \$5.99. (see demo on <http://www.youtube.com/watch?v=J2VUcz6-SY0> You can use expired AED pads with any of these to allow students to place the pads correctly. There are others also, such as: laedtrainer (www.laedtrainer.com) and Idefibrillate which will even work on a smart phone.

There are also generic AED trainers that sell for \$79-150. See www.redcrossstore.org . and look in the same catalogs listed above. AED Practitrainer and Prestan AED trainer are two generic trainers that work well for ~\$150. There is also a mini AED trainer that is a British

product I found on ebay for ~\$39 each. I'm not sure how long this one will hold up with frequent use.

Website Resources

www.heart.org American Heart Association

www.redcross.org American Red Cross

www.nchosa.org/CitizenCPRCourse.pdf ARC Course Leader Guide

www.bethebeat.heart.org (AHA website for kids)

www.becprsmart.org (AHA site for CPR in Schools—being developed)

www.choa.org/projectsave (information to have your school recognized as a HeartSafe school)

www.anyonecansavealife.org (great templates and info for sports emergency plans, etc.)

www.parentheartwatch.org (website of parents who have lost kids to sudden cardiac arrest, and whose kids have survived)

www.sca-aware.org (Sudden Cardiac Arrest Foundation)

www.sads.org (Sudden Arrhythmia Death Syndromes foundation—info for school nurses, teachers and coaches)

***Another thing you can share with your students is that they can put a CPR instructor “in their pocket”, by downloading a CPR-Choking app to their smartphone. The one I like best is CPR-Choking from the Univ of Washington. There are many available. ***

****100 Beat /Minute songs besides “Stayin’ Alive” can be found on www.bethebeat.heart.org ****

Hands Only CPR Class

CPR is a life skill everyone should have. You are most likely to use this skill on a friend or loved one...90% of sudden cardiac arrests (SCAs) happen at home. Getting quick, effective bystander CPR can double or even triple a victim's chances to survive. The earlier CPR is started the better. Every minute without bystander CPR decreases survival by 10%.

(You can show full hands only adult CPR demo on Family and Friends DVD or clip from You Tube on Hands Only CPR now)

1. **ASSESS** the victim...this is what comes first.
 - **Scene safety:** Check first to make sure the scene is safe for you to work in. It is OK to move the victim if not. Victim should be on a firm, flat surface. (Do not do CPR on a mattress: either move victim to the floor or put something like an ironing board under victim.)
 - There are two criteria you will observe that tell you, "I need your help, I need CPR!"
 - If the victim is unresponsive and
 - there is no normal breathing or only gasping.
 - Victim may also have some twitching or jerking that might make you think of a seizure; this comes with low oxygen in the brain
 - First, tap shoulders and shout--"Are you OK?" You are trying to wake him up.
 - Call for help: Tell whoever comes to call 911 and get AED. If home alone, call 911 yourself as soon as you know he is unresponsive. Then come back to continue CPR. The EMS dispatcher can coach you on speaker-phone.
 - Look at the chest to see if there is rise and fall of normal breathing—for at least 5 seconds. **(Demo these 3 steps)**
 - **IF NO NORMAL BREATHING (or only gasping): BEGIN CPR WITH COMPRESSIONS. PUSH HARD AND FAST!**
2. **COMPRESSIONS** are the most important part, Your hands become the victim's heart and you circulate blood and oxygen to the heart and brain:
 - **Hand Position (Demonstrate heel of one hand on center of chest and lower half of breastbone, with the other hand on top)**
 - **Body Position (Demonstrate: knees by victim's arm, get up on knees with shoulders directly over hands on the chest.)**
 - **Push Hard Push Fast—"Stayin Alive" rate= 100 pushes/minute. Each compression should go down at least 2 inches, then up 2 inches. (Demonstrate this briefly)**

- Switch rescuers every two minutes if possible—you can coach someone else how to do this. It's important to act as a team/coach each other.

(With Prestan manikins you will get two green lights on victim's left shoulder if pushing hard enough and fast enough. With CPR Anytime manikins, pull adult tab out at bottom of chest and you will hear a click if you are pushing deep enough.)

Compression practice: Observe practice session of no more than 6-10 people at one time, depending on number of manikins and instructors. Have each person practice the sequence of checking victim for unresponsiveness, call for help, and look for chest rise. Then each should practice compressions for 2 minutes. During this time provide simple coaching and feedback, avoiding discussions or explanations that interrupt the practice. After 2 full minutes of chest compressions, recap the steps and allow a brief rest, reviewing finer points based on observations. Only discuss Hands Only CPR—keep it short and focused on importance of quality compressions.

Then ask each student to practice for one more minute, with minimal coaching/starting at the beginning and ending with several compressions .

Another easy way to remember this is: CHECK, CALL, COMPRESS!

3. **AED: You cannot hurt a victim with an AED—it will never shock unless needed. For an adult, use AED as soon as it arrives.**

Pads always go high right (near collarbone)/ low left side of chest, just below nipple line (victim's right and left)—follow pictures on pads.

Instruct students (and have one demonstrate on AED trainer and manikin): Turn on AED by opening lid or pushing green button. Then follow verbal prompts and just do what it tells you to do. Group watching one student complete AED sequence through shock and starting CPR again will probably be sufficient. The AED will time your CPR after the first shock for 2 minutes, then tell you to stop while it analyzes again to see if a second shock is needed. This pattern will continue. Never turn AED off or remove pads until EMS arrives, even if victim becomes responsive.

Special situations---include these only if time:

- Dry chest if wet
- Shave area for top right pad, if you cannot see skin on very hairy chest. (kit attached to AED should have razor, scissors, gloves)
- Remove any medicine patches that are on the chest, using gloves
- If there is an implanted device where pad goes, move pad down just a little

- Adult pads plugged in: for children second grade or less, unplug adult and change to child pads if available. Use adult pads if not.
- Remove all clothes from chest, including cut and open bra. Jewelry usually OK, unless attached to chest.
- Pregnant victim, OK. Treat the same

If you have enough instructors, you might want to have 2 stations, one for CPR and one for AED. That way you can split students, and have time to briefly go over AED special situations and/or allow each person to turn AED on and place pads on manikin.

Many studies are coming out now showing that Hands Only CPR is as good and maybe better than full CPR with breathing. Especially if you saw victim collapse, he was breathing before collapse, so only needs you to circulate the blood and oxygen he already has. Brain cells begin to die in 4 minutes—you are bridging the gap between the collapse and EMS arrival, and keeping brain cells alive. If possible, full CPR is better for children, infants, and victims you find already down, and don't know how long they've been there. But it's OK to use Hands Only CPR on anyone if that is what you know/ or are able to do at that time.

One last important thought to cover:

This is a very simple skill that anyone can do.

You can never hurt this victim, you can only help.

Fears you might have:

- **Liability: Good Samaritan Law**
- **Germs: Hands Only CPR avoids this (STRANGER, BLOOD, ETC)**
- **Might not do it perfectly: That's OK!!! Whatever you do will be helpful. If all you can remember is to push hard and fast in the middle of the chest, then do that, and you'll be doing well.**
- **Broken ribs will heal if they happen—most likely with elderly victims**
- **Others?**

QUESTIONS?

I think this class can be taught in 30-45 min, depending on the instructor, number of students, manikins, and exactly how much you cover.

More Thoughts on Hands Only CPR for Schools:

Hands Only CPR is not a certification class, but it does seem to be the wave of the future. Currently the AHA Family and Friends class does only Hands Only for the adult and then does full CPR for child and infant. There are many studies coming out now that it is just as good for the victim, survivor rates are good and actually increased because more bystander CPR is given. Bystander CPR for a victim doubles or even triples the survivor rate! So preparing as many bystanders as possible should be our goal. We want them to be able to “Recognize” and “ACT”. The KISS principle is key—Keep it Simple for the Student. Our goal is to teach them the basics of what to do and to minimize any fear factor they may have. Your Hands are Their Heart!

What you need to teach:

- Family and Friends DVD—Adult Hands Only—1st 15 min. or the DVD from a CPR Anytime Kit-Adult section (\$34.95 at www.cpranytime.org)
- Get familiar with the DVDs before trying to use them. With either of these, I would add a little from the class outline, especially about dealing with their fears.
- Facilitator—does not have to be a CPR Instructor.
- Manikins---I for 3-5 people is ideal. Often you can borrow some from local EMS—it’s worth an “ask”.
- You will need AV for DVD. A recording of Stayin’ Alive would be nice to have while they are practicing (or you can download the ringtone on your phone, and play a few measures when they start compression practice. One study of med students has shown that practicing with the music has helped students remember the skill better and longer.)
- An AED trainer (again ask EMS). There is one that can be downloaded onto an IPAD also.
- Time and numbers: I would try a small group first, and work out the kinks. I believe you could cover Hands Only CPR and AED with 3-5 people/manikin in 30-45 min. I have heard of folks who do it in 30 min, but I wanted 45 minutes if at all possible—to have time for questions, etc. and not feel rushed.

Things to Watch For with Students:

- Hand position: middle of the chest between the nipples, lower half of the breastbone (but still off the xiphoid). Only the heel of the hand should be in contact with the chest. One hand on top of the other, holding fingers up if possible.
- Body Position: up on knees, shoulders vertically over hands to use whole body. Count out loud.
- Compressions 2 inches deep, 2” down, and 2” up (full chest recoil)
- Compressions at the rate of 100/minute (Stayin’ Alive or another song from the enclosed list---especially if teaching students

- Teach them to switch rescuers every 2 minutes, if possible. And to coach each other if not fast enough or hard enough.

No Fear CPR:

- Minimize their fear factors:
 - Liability: Good Samaritan Law in all 50 states covers CPR and AED. Just do the best you can to the level of your training.
 - Germs: Hands Only avoids this issue of mouth to mouth fears
 - I might not do it perfectly...or I might hurt him. The good news is you can't hurt him (even a broken rib will heal). You can only help him. And if you don't remember all the parts but you push hard and fast in the middle of the chest, you have a great chance of helping and of him being a survivor. Also when you call 911 they will walk you through the steps.
 - Remember no victim will ever ask you for your CPR card, but they will be grateful if you are able to help them. Know that you have the knowledge and skill to act as of today!

If you get questions you're not sure about feel free to send them to another CPR instructor you know.. Let students know where, in your area, they might take a full CPR class.

For children and infants we all know that full CPR would be better, because more chance of respiratory issues, so encourage them to take a full CPR course, or order a CPR Anytime Kit (for adult/child or for infant) for \$34.95 at www.cpranytime.org. Their whole family can learn this way.



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CPR &

CPR Anytime Pre Test

1. What grade are you in? _____
2. It is better to do any CPR than to do no CPR. a) True
b) False
3. How do you check a person for response? a) Tap or shake shoulder b) Shout or speak loudly and ask if they're okay c) Both a and b
4. It is appropriate to use Adult Hands-Only™ CPR in which situation? a) A drowning victim b) An unconscious child c) An adult you witness go into cardiac arrest
5. When providing Adult Hands-Only™ CPR one should push on the victim's: a) Leg b) Mouth c) Center of the Chest
6. What are the correct steps for providing Adult Hands-Only™ CPR? a) First dial 911 and then push hard and fast in the center of the victim's chest b) Push hard and fast in the center of the victim's chest then dial 911 c) Give two breaths then dial 911
7. When using an automated external defibrillator (AED) you should: a) Apply pads to the victim's bare chest b) Apply pads over the victim's clothes c) Apply pads to the victim's arm and leg



**American
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CPR

CPR Anytime Post Test

1. What grade are you in? _____
2. It is better to do any CPR than to do no CPR. a) True
b) False
3. How do you check a person for response? a) Tap or shake shoulder b)
Shout or speak loudly and ask if they're okay c) Both a and b
4. It is appropriate to use Adult Hands-Only™ CPR in which situation? a)
A drowning victim b) An unconscious child c) An adult you witness go into
cardiac arrest
5. When providing Adult Hands-Only™ CPR one should push on the
victim's: a) Leg b) Mouth c) Center of the Chest
6. What are the correct steps for providing Adult Hands-Only™ CPR? a)
First dial 911 and then push hard and fast in the center of the victim's
chest b) Push hard and fast in the center of the victim's chest then dial
911 c) Give two breaths then dial 911
7. When using an automated external defibrillator (AED) you should: a)
Apply pads to the victim's bare chest b) Apply pads over the victim's
clothes c) Apply pads to the victim's arm and leg

AED Teaching Info:

Pads always go high right near collarbone, and lower left side of chest. Charge will go from top pad, through the heart, to bottom pad---and back again. AED looks for Ventricular fibrillation, and calls for a shock if seen. If the person who brings the AED is a first responder, the first rescuer can continue compressions while the pads are being placed, and until the AED says “Clear—to analyze” (minimize interruptions to compressions...) If the person who retrieves AED is not a trained responder and only one rescuer is present, that person will stop CPR and place the AED.

As the AED operator, you are the “boss”. Assume you are the only one listening to it, and when it says “Clear” or “Don’t touch him”, you need to say, assertively, “Back up, don’t touch him” or something like that, especially if family members are there. (both before it analyzes and before it shocks)

After a shock, the AED will direct you back to CPR (to prime the pump) and time you for two minutes. If the second analysis says “no shock advised, if needed continue CPR”---that means if he’s still as a stone, color poor, no movement or breathing, continue CPR. If pinking up, other signs of life, OK to watch closely and see how he does. The AED will still reanalyze in 2 more minutes, and will continue that pattern. Once on, don’t remove pads and leave the AED turned “on”. Also “no shock advised” can mean flat-line, so doesn’t mean you are out of the woods—and he may continue to need CPR.

Special situations with AED—these are no longer on Heartsaver DVD:

1. Wet chest (pool or sweaty), dry it off. Obviously pull from water first—Ok to be lying on wet pool deck or on snow.
2. Hairy chest (very hairy) pads will not have good skin contact. Shave first just in pad position(s).
3. Implanted device (lump that looks like “God didn’t put it there”—where you want to place the pad)—move the pad down just a little so its not right on top of device (device will block some of flow). You would be using the AED even if pt has implanted defibrillator if he meets the two criteria (unresponsive and no normal breathing---ICD/pacemaker is not working...)
4. Medicine patch—if near where pads go, wear gloves to remove it and wipe skin off.
5. Adult pads—use if over age 8. Child pads---infant and child up to 8 yrs. If chest is large enough, place pads in usual places. If chest very small, can place pads on the front and back, sandwiching the heart in between. For child, if you only have adult pads, use them. For infant, use child pads if you have them, adult OK if you don’t.
6. Bra and multiple layers of clothes---cut off with scissors. (worried about metal underwire—don’t try to figure it out—just cut and lay to the side). If too many bystanders, have them turn around, facing out, and stand shoulder to shoulder to make a barrier for you.

7. Jewelry should be OK except for nipple piercings—if you can remove easily and quickly. If not, don't worry.

Other factoids:

AED has ~ 90 shocks on battery, so no worries. AED will not shock someone that doesn't need to be shocked. You can't hurt someone with it. Victims have recovered after as many as 12 shocks (probably more). You never want to have a non-working or locked up AED. Maintenance checks at least monthly. AED does a self-test daily. Replace pads and batteries as required by manufacturer. Pads are one-time use item. OK to use cell phone in the vicinity of AED. Victim on metal bleachers—OK to use AED. Use AED on pregnant victim if they meet the criteria (baby pretty well protected in amniotic fluid---and is a goner if we don't get Mom's heart going again. Your AED rep should come and download data after a use. Don't let EMS take your AED—you may never see it again.

Questions a Student Might Ask

Why don't we teach AED for infants?

Cardiac arrest in infants is most often caused by a problem with breathing that worsens over a short period of time. This means that an AED is less likely to be effective in infants compared with adults. Also, the 2010

AHA Guidelines for CPR and ECC recommend a more advanced defibrillator than an AED. This more advanced defibrillator is taught in other more advanced courses. Although an AED could be used for an infant, the science experts were concerned with adding another level of knowledge to this course because infant cardiac arrest is fairly uncommon and because the AED is much less likely to be needed. For these reasons, this topic is best left for more advanced courses.

Why isn't there choking practice for adults and children? Actions to assist a person who is choking cannot be safely performed on other students in the classroom. Unfortunately, most manikins used in the classroom are not suitable for effective practice. Although we have included the choking practice before, it likely does not prepare people for a choking emergency because it can-

not be practiced correctly in the classroom. Rather than practice potentially incorrect techniques such as inadequate abdominal thrusts and to avoid risk of harm to other students, the choking practice was removed from the course.

Why don't we practice more with the AED?

The AED is easy to use. AED prompts are clear and students should follow them. There isn't a lot to teach. Plus, each AED has slightly different prompts, pad design, and basic operation. Fortunately, the prompts of any AED are sufficient to guide the user toward using it correctly. Students should use the AED as soon as it arrives. Students must know how to turn the AED on. That's why in the CPR test we ask students to turn the AED on. Once the AED is on, all the user needs to know is that the prompts must be followed.

We show a complete AED demonstration in the video so students can see exactly how the sequence works, and the first time students practice with an AED, they practice all the way up to giving a shock. Because the most important parts of AED use are using it quickly and turning it on (so the prompts start), those are the parts we test.

Is there a specific place to tap a person when checking for a response? It doesn't matter where the person is tapped. For consistency, we teach tapping the shoulder in adults and children and tapping the foot in infant CPR.

Why are manikin shirts required?

Moving clothes out of the way is an essential part of CPR. Students need to practice moving clothes out of the way.

Can I get into legal trouble if I don't do CPR correctly?

Do CPR to the best of your ability. As long as you are trying to do the right thing and you are not trying to hurt the victim, Good Samaritan laws will protect you in most states.

I am afraid to give breaths without a mask. Should I just do nothing if I don't have a mask? You might carry a mask with you. Some masks fold up very small and fit on a key ring. If your job requires you to use a mask and you don't have one, do compressions until someone with a mask arrives. Compressions alone are better than doing nothing.

Can I catch a disease such as hepatitis or AIDS by doing CPR? CPR has been performed for years and there has never been a case of transmission of these diseases from victim to rescuer.

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When should I stop CPR?

Stop when

- The person starts to respond
 - Someone with more advanced training arrives and takes over
 - You are too exhausted to continue or it is dangerous for you to continue, such as during an airplane landing (resume as soon as you can unfasten your seatbelt)
- How do I give CPR to someone with an opening in the neck?*** Some people have an opening that connects the airway directly to the skin. This is called a stoma. If the person needs breaths, give them directly into the stoma.
- If I find a person on a bed, should I move her to the floor so that I have a hard surface under her back?*** If you can, quickly move the person to a firm surface to give CPR. Make sure you support the head and neck. If you are alone and can't move the person, try to find something flat and firm. Slide it under the back to provide a firm surface.
- What should I do if the person has dentures?*** Leave them in place if possible. If they get in the way of creating an airtight seal, remove

them.

Does the AHA endorse “cough CPR” for non–health- care providers? No. “Cough CPR” doesn’t work if the person doesn’t respond. If you think you or someone else is having

a serious medical emergency, phone your emergency response number (or 911).

Why don’t we do a pulse check?

Even some healthcare providers have a hard time telling if there is a pulse within 10 seconds. It is better to give CPR to a person who has a pulse than to not give CPR to someone who needs it.

What should I do if the person vomits?

1. Turn the person’s head to the side so the person doesn’t choke.
2. Clear the mouth by sweeping it with a cloth or other material wrapped around your fingers.
3. Reposition the person and resume CPR.

If I am choking and alone, what should I do?

Although there is no science to support this recommenda- tion, a person who is alone and choking may be able to give abdominal thrusts to himself over a hard object such as the back of a chair.
