

**THE**  
**AIRCRAFTSMAN**

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Corpus Christi Army Depot

**AROUND THE DEPOT**

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OH-58D**

**OVERHAUL.**

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- Artisans discover new solution to a familiar problem
- CCAD's first OH-58D overhaul
- Storm hits depot
- Award photos
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- Around the depot

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**ON THE COVER> A  
CCAD artisan installs  
shear ties to the  
frames of a UH-60  
Black Hawk tail  
cone. Photo by Jaclyn  
Nix**

Soldiers work alongside CCAD artisans for hands-on depot level maintenance training. Photo by Kiana Allen



### THE AIRCRAFTSMAN

Corpus Christi Army Depot

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[http://ccadportal.ccad.army.mil/AMCC-HC/AMCC-HCP/Pages/Division\\_Home.aspx](http://ccadportal.ccad.army.mil/AMCC-HC/AMCC-HCP/Pages/Division_Home.aspx)

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# DEPOT WORKS ITS FIRST UH-60 L-L RECAPITALIZATION: STRUCTURES AND ELECTRICAL.

By Jaclyn Nix, Public Affairs

Corpus Christi Army Depot welcomed its first UH-60L Black Hawk into the new L to L Recapitalization (recap) Program, June 2011.

UH-60 Black Hawk Lima models follow the same production process flow as CCAD's UH-60A-A-L program, which extends the life of a Black Hawk by ten years by remodeling it with the latest, best technology and systems making it equal to or better than new helicopters.

Each Black Hawk weaves its way through the recap process to optimize its performance and durability.

Upcoming issues in the Aircraftsman will briefly describe the

process showing just how much goes into providing the Warfighter a state-of-the art aircraft that is better, faster and more cost-effective.

This story picks up where it left off in the December 2011 issue of the Aircraftsman as part two of a four part series, where the first Black Hawk was inducted, disassembled, analyzed, cleaned and stripped.

This edition will outline the structural and electrical processes used to modernize and repair the helicopter to the

L model, before moving on to its next phase.

## Phase 4 – Structures and Electrical

Once the UH-60L is analyzed by Pre-Shop Analysis, the Structures and Electrical shops receive the bird to begin the statement of work.

“The A-L has all the same upgrades as the L-L,” said Aaron Shephard, Structures Section Chief. “This L-L has seen some hard days and has a lot of metal work and is

L-L Recap, see pg. 6



Sheet Metal Mechanics, Steve Garcia and Rigoberto Cruz, install a repair patch on the top deck of CCAD's first recapitalized UH-60 L-L. Photo by Jaclyn Nix

## OH-58D KIOWA WARRIOR



CCAD artisans hand over the first OH-58D to come out of the Overhaul Program. The ceremony took place in Hangar 44 on May 16, 2012.

## CCAD is Cost-Effective and Critical to Army Combat Power

By Juan Canchola, Public Affairs

A sense of excitement and pride filled Corpus Christi Army Depot as artisans and members of the Tennessee Army National Guard admired the work on a completely overhauled OH-58D Kiowa Warrior.

“What you are doing here today can’t be done anywhere else in the world,” said Colonel Christopher B. Carlile, CCAD Commander.

CCAD actively overhauls other platforms, including the UH-60 Black Hawk. This is CCAD’s first Kiowa Warrior overhaul—a process that includes restoring an aging helicopter to like-new condition but with improved capabilities and the latest technology.

The KW Overhaul program is part of the Army’s effort to invest in its industrial base. Without CCAD, sustaining the KW fleet would be costly, leaving no other option but to purchase new aircraft. The Army recognizes CCAD’s exclusive cost-saving capabilities making it mission-critical to the future of defense. Because of CCAD, the

**Kiowa Warrior, see pg. 8**



Photos by  
Kiana Allen and  
Ervey  
Martinez



A workstation lies deserted and ruined after a thunderstorm, strong winds and hail ripped apart the roof over the Aviations Systems Program Management Division.

## Texas Storms Damage Corpus Christi Army Depot, Highlights Critical Need for Improved Infrastructure

**By Brigitte Rox, Public Affairs Specialist**

The Corpus Christi Army Depot (CCAD) is the Department of Defense's (DOD) primary source of repair and modernization for helicopters and their components, but it was hit hard with severe thunderstorms that swept through South Texas, May 11.

Severe wind, rain and marble-sized hail pounded the depot, tearing apart roofs and causing severe water damage to the 70-year-old infrastructure.

Over a very short amount of time, excessive amounts of rain caused a backup in the storm water drain lines, causing them to overflow which led to severe flooding in the roads, production and office areas.

"It was pouring down rain," said Marchee Jones, computer operator within Building 8—CCAD's main production facility. She wasn't referring to conditions outside. She was talking about her office.

Jones's area was hit the hardest but, by the time the roof caved in above her, most of

Jones's co-workers had gone for the day.

Jones and the five remaining employees scrambled to cover the new computer systems that were just installed the previous week. There was simply too much rain.

Approximately two inches of water flooded the area. Soaked ceiling tiles collapsed to the floor, exposing damp insulation and pipes.

A total of eight buildings and one hangar suffered leaks, water damage, downed equipment and power outages.

Damage is estimated in the tens of thousands of dollars, said Mark Gonzalez, CCAD's Director of Infrastructure Operations.

"CCAD is a grand ol' girl but she's getting old," said Mike Webb, one of the leading engineers at the depot.

Webb and crews were hard at work repairing damages from the weather, patching up the buildings until funding could be approved to complete CCAD's new Dynamic Component Repair Facility (DCRF).

"The DCRF is needed infrastructure," said Webb. "This won't happen anymore with the new facility."

The new DCRF is built 25 feet above sea level and made to withstand a Category 5 hurricane's storm surge, 160 mile per hour winds and seismic activity. It will be blast resistant

**Storm Damage, see pg. 7**

## L-L Recap, cont.'d

in definite need of TLC to get it out where it needs to be.”

Since the aircraft is typically worn down from intensive use on the field, the structural integrity must be improved, strengthened and modified to coincide with the ten year life expansion it needs to prolong the fleet.

Corrosion is a common problem seen on aircraft. This Black Hawk experienced extensive corrosion, especially in the cock pit.

While the aircraft waits for a spot in the hangar, the work leaders research and order parts they'll need. Each aircraft goes through a slightly unique process, depending on the statement of work that details its individual needs.

“We completely break down the [statement of work] book from every write-up to see what is involved and to establish a flow of the aircraft,” said Shephard. “Everything is split up into the nose, cockpit and cabin. If there are any special needs of the aircraft we address that up front.”

It is important for the electrical and structural shops to work side-by-side, working simultaneously throughout the process.

CCAD structural artisans modernize and rebuild the aircraft from the nose to the tail cone, piece by piece. They are upgraded using

special modifications which include a number of upgrades from the A-A and A-L models.

Once Structures finishes a particular area of the aircraft, Electrical does their work to re-install the wiring.

Upon arrival to the hangar, the Black Hawk is loaded onto a cradle while the landing gear is removed. All potentially affected areas are then torn down for evaluation. Two-level maintenance stands surround the Black Hawk for artisans to work safely and ergonomically as they access every angle and rivet on the bird.

During this phase, electrical artisans remove the wiring to allow easy access for structural repairs.

“We [remove] about 40% of appliances for the sheet metal [experts],” said James Edgar, Electrical Work Leader.

UH-60L models are loaded with an integrated vehicle health monitoring system (IVHMS) to track the health of the airframe.

“This airframe has a history of 308 beam failures and IVHMS is supposed to track that,” said Edgar.

The 308 beam, also referred to as the spine of the aircraft, is the largest and primary structural piece of the Black Hawk, located in the cabin overhead. The 308 beam on this particular aircraft was cracked, requiring a complete replacement.

Another critical factor in this process is a servo beam alignment. These beam rails mount the primary flight control hydraulic system that gives flight control inputs to the main rotor. If it is not aligned properly, the hydraulic system has the potential to leak loose pressure and even fail.

While structural repairs continue, a crew repairs the electrical systems, including the wiring harness, antenna cabling, distribution boxes and connectors.

“We do a lot of wiring and connector changes,” said Edgar.

The landing gear and special modification upgrades are then installed at CCAD before it moves to the laser fixture for a drive shaft alignment.

As is typical of CCAD, artisans found ways to improve the recap process.

“The artisans did an outstanding job and saved about 30% of the allotted man hours while in the fixture,” said Shephard. “This allowed us to move on to the drive shaft supports (4 each), oil cooler brackets and plate replacement.”

Next, the Black Hawk will be cleaned, primed, tested, assembled and painted before pilots test fly the bird and deliver it to its customer.

**To be continued: Phase 5 – 7 Clean/Prime/Paint, Automated Test Cell and Assembly**

## Storm Damage, cont.'d

and fulfill anti-terrorism protection requirements. The building will be fully air conditioned, preventing costly corrosion damage.

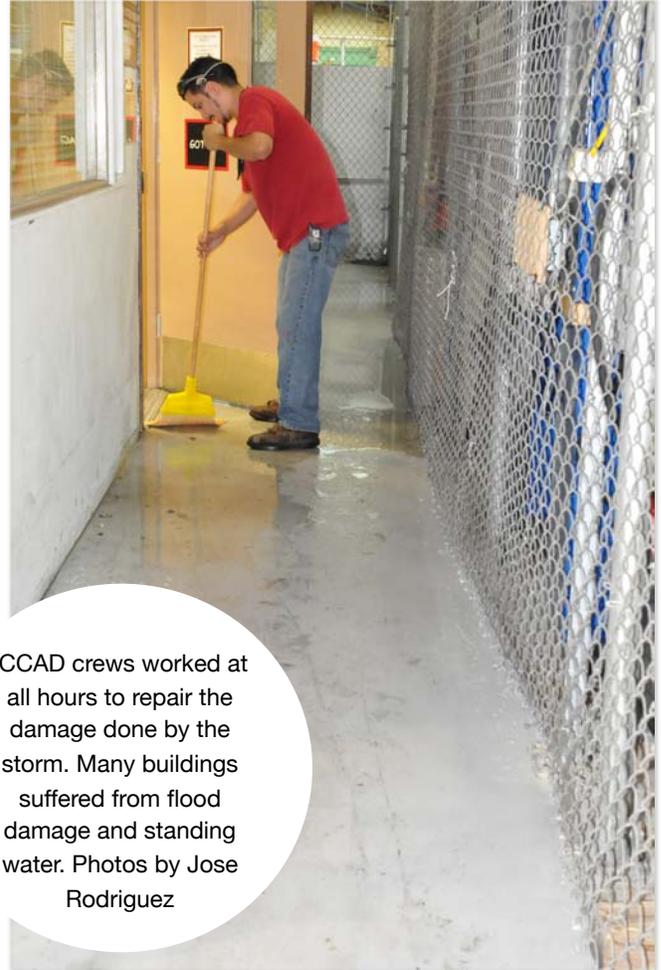
At this time, CCAD is operating at sea level, susceptible to flooding from hurricanes and severe thunderstorms.

“The major repairs have been done,” said Webb on Friday morning regarding the major damage in Building 8. The roof was the first thing to be repaired. By the time the second storm hit Thursday night, the roof was secure.

Still, leaks, flooding and debris made sections of CCAD look like a tornado hit. Five tornadoes were spotted in the area Thursday but none hit the depot.

To save money during a time of massive budget cuts, the Army is looking to invest in its industrial base, reinvesting in its depots rather than going to private industry for support. CCAD is mission-critical to the future of defense, offering a level of service found nowhere else in the world. Without CCAD, the Army would be unable to sustain maximum combat power to the Warfighter. The depot minimizes government spending through maintenance, repair and overhaul of rotary wing aircraft while increasing production. In FY2011, CCAD produced more than it ever has while saving more than \$47.6M to the American taxpayer.

The main production facility, Building 8 is the largest facility at CCAD, boasting 1.2M square feet. It houses the majority of rotary wing aircraft components, maintenance and repair. Portions of the building were constructed prior to 1942. Despite the numerous additions made since, production operations are not spatially sufficient to sustain demand. Excluding scheduled maintenance



CCAD crews worked at all hours to repair the damage done by the storm. Many buildings suffered from flood damage and standing water. Photos by Jose Rodriguez

downtime, the current facility is operating at capacity; utilizing three shifts per day, six days per week.

Building 8 rests on an Environmental Resource Conservation and Recovery Act site, restricting renovation of the existing facility. The building is 70 years old, well beyond its design life with inefficiencies in electrical distributions, roofs, and structural and other components. Dated construction materials and space limitations leave CCAD unsuitable for modern manufacturing processes.

The new DCRF must be completed by or sooner than FY16 for CCAD to meet production and quality requirements to ensure the Army retains its helicopter capabilities. Until then, CCAD has no choice but to hope for the best for the upcoming hurricane season.

## Kiowa Warrior, cont.'d

Army is able to efficiently sustain maximum combat power for the Warfighter.

“I can’t even begin to explain to you the importance of what CCAD does for the cavalry of the United States Army,” Col. Robert L. Grigsby, Project Manager for Armed Scout Helicopters said as he awarded artisans involved with the program a specially designed poker chip as a token of his appreciation for all of their efforts.

According to Col. Grigsby the effort put forth from the artisans of CCAD is essential to supporting our Soldiers. “It is critical to the Warfighter to have this overhaul process here at Corpus Christi Army Depot. You are able to take a worn out helicopter and make it brand new.”

The Army is approved for a complete fleet of 368 OH-58D Kiowa Warriors, but is 39 short. Since production ended on these aircraft in 1999, increasing the number of 58Ds to the soldier is crucial at a time when cost-effective measures are critical. The Army is aggressively pursuing ways to sustain the fleet and is looking to its industrial base and the entire Aviation Enterprise for support.

The milestone took a little over a year to complete. During the process, an innovation born from the CCAD Kiowa Warrior team eliminated 15 pounds of weight from the aircraft. This decreases fuel consumption and allows the Warfighter to carry more ammunition to the fight. A reduction of helicopter weight also translates into huge cost savings for the Army.

Jeremy Brewer, an artisan in the Kiowa program, has real wartime experience working on the helicopters in Iraq, and for him, the completion of the aircraft was bittersweet. “It feels good to see it go. There was a lot of hard work, ups and downs, and a lot of blood, sweat and tears in that aircraft,” said Brewer.

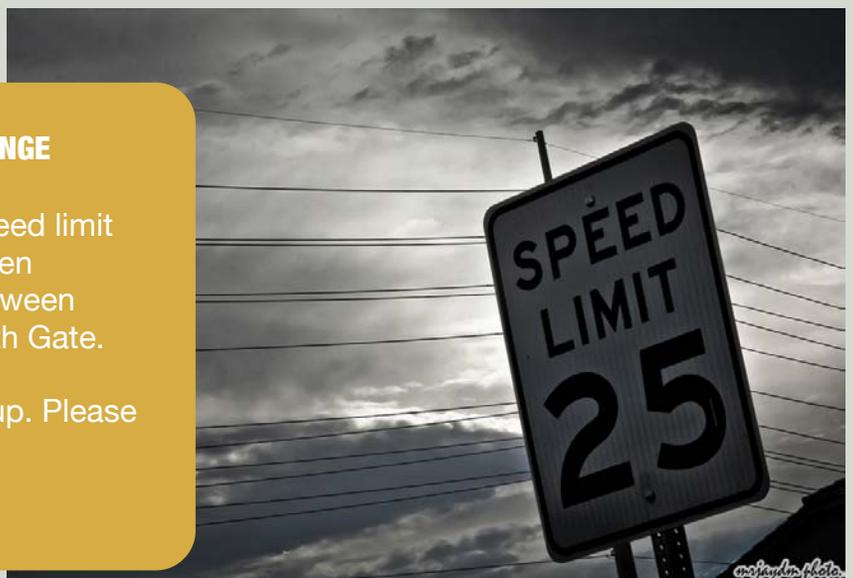
The Kiowa Warrior is a single-engine, two-seat reconnaissance, light attack and defensive air combat aircraft that has logged more than 800,000 combat hours between Iraq and Afghanistan where it battles sand, snow and high altitudes. These war birds are life-saving assets for troops on the ground. The Army will rely on the OH-58D Kiowa Warrior as the primary air cavalry helicopter at least until 2025.



### SPEED LIMIT CHANGE

Be advised that the speed limit on Ocean Drive has been reduced to 25 mph between Lexington and the North Gate.

New signs have gone up. Please drive carefully.





Machinist Edward Lopez (left) makes adjustments during the application of the shim repair. Photo by Juan Canchola

The tail landing gear fork (bottom) with the shim repair applied and machine finished. Photo by Noel Castillo



## CCAD ARTISANS DISCOVER NEW SOLUTION TO A FAMILIAR PROBLEM **By Juan Canchola, Public Affairs**

A need to maintain the AH-64 Apache helicopter fleet had Corpus Christi Army Depot artisans and partners coming up with solutions to repair a small part that was a major problem.

Machinist supervisor Thomas Castellanos was approached by U.S. Army Aviation and Missile Research Development and Engineering Center (AMRDEC) to fix a damaged landing gear component for the Apache line of helicopters. In the Apache, a U-shaped fork that holds the rear wheel rubs against a spacer, causing wear and tear to the piece. The only solution

to this problem was to replace the fork completely.

The forks for these aircrafts are in short supply which is causing difficulties in obtaining replacements. This component shortage is grounding aircraft.

“We have discussed redesigning the components for the fork with a partner, but that won’t be for a while, or possibly not at all,” said Noel Castillo, AMRDEC engineer. “Right now we are concentrating on repairing this fork because there are none in the supply system.”

Castillo initially requested that the worn portion of the tail

landing fork be milled down to a certain specification at CCAD until a solution could be found.

Thomas Castellanos and his team milled the fork in their shop at CCAD. Upon its completion, Castellanos and Castillo concurred that an alternative solution would not only reduce the wear, but also extend the time between maintenance intervals.

Stainless steel bonded liners, called shims, were then added to the forks to maximize their durability. Shims are used in a variety of fixes such as stabilator fittings and main rotor shafts.

**Landing Gear, see pg. 10**

## Landing Gear, cont.'d

According to Castellanos, "This process had never been done before, but we have the capacity to get it done."

Castellanos turned to machinist Edward Lopez to fine-tune the milling process.

"Edward Lopez is my go-to guy. He wrote the program and carried it out quickly and efficiently."

"During the whole process there was no work stoppage. We just worked the repair in to our schedules," said Castellanos.

Various departments throughout the depot also contributed to this innovative repair. Narciso Martinez in the Jig and Fixture Shop fabricated the shims. In the Composite Shop, Martin

Perez, Ruben Delgadillo and Nester Barrera bounded the shim to the forks, and John Quesada was instrumental in the fluorescent penetrant inspection (FPI) process.

This process saves thousands of dollars, not including shipping costs and man-hours to install the new fork. CCAD can repair forks in about a day but, since this is a new process, the hours required to complete the repair might be reduced as the process is refined.

According to Noel Castillo, "For other aircraft out in the field with similar wear found on fork assembly components, this repair will be possible through a

Maintenance Engineering Order (MEO)."

Innovation drives success at Corpus Christi Army Depot. Suggestions and ideas to improve existing processes are essential to respond to the evolving war tempo and defense budget.

The artisans at CCAD understand that their work directly impacts the soldiers on the field.

Every artisan is driven to support CCAD's mission to be better, faster and more cost-effective. CCAD's goal is to increase production while saving taxpayer money and minimizing waste while getting the aircraft or component to the Warfighter faster.



### NOTICE

**Effective immediately, all parking within LOT GG (DLA) will be strictly enforced by NASCC Security. Vehicles must have a DLA parking decal in order to park there.**

**To avoid receiving a boot or citation, please park in either parking lot on the west corner of First and D Street (CBP and Hangar 51).**

**POC: Thomas Reed, Security Officer, DLA Distribution Corpus Christi, 961-2085.**

# AWARDS AROUND YOUR DEPOT



Patricia Martinez receives 10 year Length of Service Award.



Benito Salinas Jr. receives an On the Spot Award.



Neil Meyer receives 10 year Length of Service Award.



David Rodriguez receives Commander's Award for Quality.



Jodie Clouse, Rosendo Espinoza, Christopher Evans, Gabriel Garcia, Todd Harnish, Samuel Losey, Joseph Nesmith, James Rodriguez, Gilbert Torres and Daniel Tranbarger receive Collateral Duty Inspector Certificates.

# AROUND THE DEPOT!

"The Steady Ones"



"The Steady Ones"



Members of the cycling group "The Steady Ones" ride down Shoreline Boulevard. Left : Mike Martinez, Work Leader for UH60 Transmissions & Gear Box Division, Ray Viramontez from Power Train PSA Division and leading the pack Simon Gonzales from Quality Auditing Branch.

More than 50 local cyclists gathered in Cole Park for the Ride of Silence, a worldwide event in memory of fallen cyclists worldwide. Members of the cycling group "The Steady Ones" were among those that participated.

Left : Jesse Guevara, Mike Martinez and Juan Rojas from the UH60 Transmissions & Gear Box Division, Far Right : Simon Gonzales From the Quality, Auditing Branch and Chris Santos Captains of "The Steady Ones" cyclist group.



Prevention & Addiction Council of Corpus Christi visits CCAD

## CCADers Host Fundraiser!

Hydraulic and Mechanical Shop employees hosted a BBQ fundraiser in May for a fellow co-worker whose family was sent to the hospital after they were hit by a drunk driver. The shop put the event on in order to help the family with medical expenses. The benefit raised more than \$5,000. "I have to admit it was impressive to watch so many people pull together to help out a co-worker and friend," said Jeff Barnes.



# COLORED BADGES IDENTIFY ACCOMPLISHED ARTISANS

## Special Honor = Special Responsibilities

With each arm band awarded, artisans understand that this honor carries great responsibilities which include the production of high quality components and aircraft, careful and thoughtful compliance, defect reduction, training less experienced, seeking opportunities for ways to improve processes and most importantly, their physical presence on the shop floor. The presence of these special artisans will help CCAD build quality into every operation and ensure the depot leaves a legacy of well trained, skilled artisans.



**Orange Badges: Quality Control Inspectors**

**Blue Badges: Work Leaders and selected skilled artisans**

**Red Badges: Pre-Shop Examiners**

# PREVENTION IN THE NEWS...

101 Days of Summer

## Non-Alcoholic Cocktail Drinks: Summer Mocktail Recipes

Summer is the season for parties. As the host you are responsible for everyone at the party. While alcohol is often a major staple of these events, what about the under 21 crowd, designated drivers, and non-drinking guests? Well, here are a variety of recipes for some delicious alcohol-free mocktails that everyone can enjoy.



### Screwless Driver

1 1/2 oz Ginger Ale  
5 oz Orange Juice  
Mix and add ice.

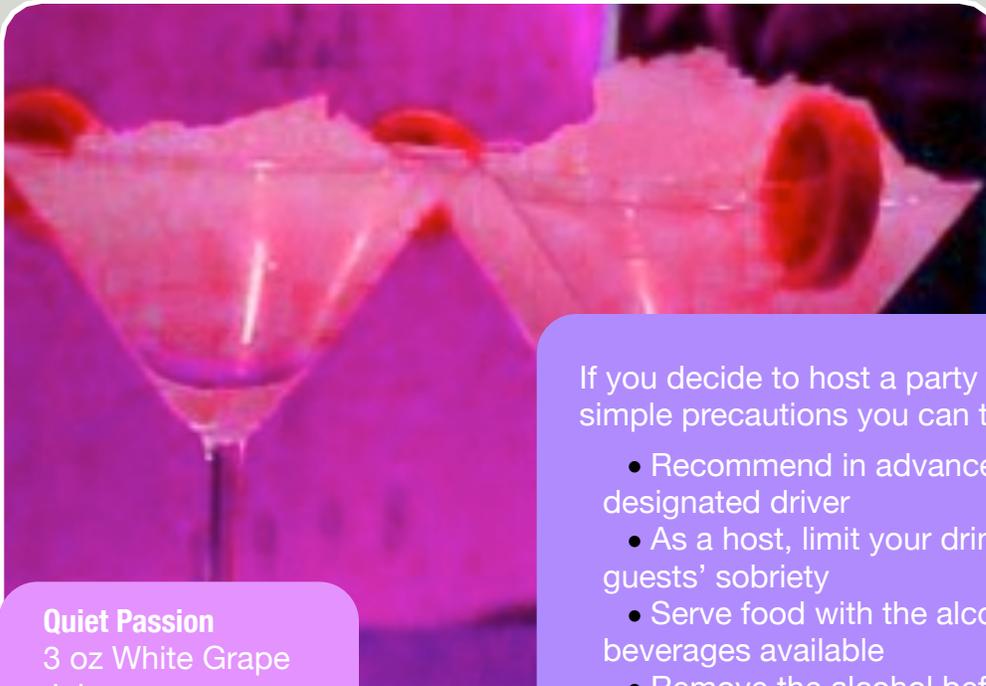


### Unfuzzy Navel

3 oz Peach Nectar  
3 oz Orange Juice  
3 oz Pineapple Juice  
1 tsp. Lemon Juice  
Dash of Grenadine  
Combine in shaker half filled with ice.

### Down East Delight

2 oz cranberry juice  
2 oz grapefruit juice  
1/2 cup orange juice  
1 oz honey to taste  
Mix together and serve chilled.  
Add a maraschino cherry, orange slice and grapefruit skewer for garnish.



### Quiet Passion

3 oz White Grape Juice  
3 oz Grapefruit Juice  
1 oz Passion Fruit

If you decide to host a party in your home, there are some simple precautions you can take:

- Recommend in advance that your guests use a designated driver
- As a host, limit your drinking so you can judge your guests' sobriety
- Serve food with the alcohol and make non-alcoholic beverages available
- Remove the alcohol before the party ends and switch to coffee and soda
- Call a cab for anyone who appears to be intoxicated

# CDC: Test All "Boomers" for Hepatitis C

By John Gever, MedPage Today

With "baby boomers" believed to account for 75% of the hepatitis C infected population in the U.S., the CDC is recommending that everyone ages 47 to 67 be tested for infection.

The CDC estimates that some two million Americans born from 1945 to 1965 are infected with HCV -- that's about 3% of the boomer generation. But because many years usually elapse before noticeable symptoms develop, most don't know they are infected.

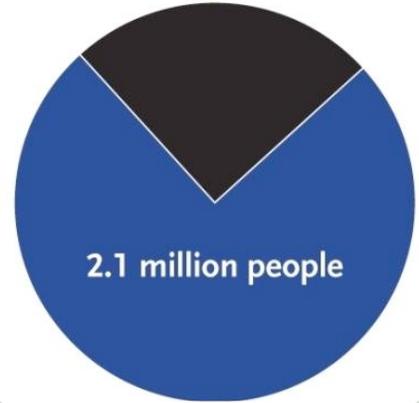
The CDC said one-time HCV testing of all Baby Boomers "could identify more than 800,000 additional people with hepatitis C, prevent the costly consequences of liver cancer and other chronic liver diseases, and save more than 120,000 lives."

"CDC believes this approach will address the largely preventable consequences of this disease, especially in light of newly available therapies that can cure up to 75% of infections," the agency said in a statement issued Friday.

Most boomers do not have the risk factors that, until now, the CDC had used as the basis for testing recommendations. Those risk factors include use of illegal injected drugs, receiving blood products or organ transplants before HCV testing became routine, known exposures to HCV, presence of hepatitis symptoms, and all patients with HIV.



Baby boomers represent more than 75% of American adults with hepatitis C



Vietnam era veterans -- all Baby Boomers -- are a well-known risk group due to blood exposure in military field hospitals as well as drug use.

Infection with HCV often leads to liver cancer. However, the recent introduction of HCV protease inhibitors, including telaprevir (Incivek) <<http://www.medpagetoday.com/InfectiousDisease/GeneralInfectiousDisease/26638>> and boceprevir (Victrelis) <<http://www.medpagetoday.com/InfectiousDisease/Hepatitis/26469>> , has made the disease more manageable, possibly even curable.

The CDC also set Saturday, May 19, as "National Hepatitis Testing Day," and announced that it would make a total of \$6.5 million in grants to make testing available to specific populations including Asian-American Pacific Islander communities (which have high rates of hepatitis B infection) and injection drug users, as well as members of the "boomer" generation.

## Hurricane Safety Checklist

Hurricanes are strong storms that cause life- and property-threatening hazards such as flooding, storm surge, high winds and tornadoes.

Preparation is the best protection against the dangers of a hurricane.

### Know the Difference

**Hurricane Watch**—Hurricane conditions are a threat within 48 hours. Review your hurricane plans, keep informed and be ready to act if a warning is issued.

**Hurricane Warning**—Hurricane conditions are expected within 36 hours. Complete your storm preparations and leave the area if directed to do so by authorities.

### What should I do?



- Listen to a NOAA Weather Radio for critical information from the National Weather Service (NWS).
- Check your disaster supplies and replace or restock as needed.
- Bring in anything that can be picked up by the wind (bicycles, lawn furniture).
- Close windows, doors and hurricane shutters. If you do not have hurricane shutters, close and board up all windows and doors with plywood.
- Turn the refrigerator and freezer to the coldest setting and keep them closed as much as possible so that food will last longer if the power goes out.
- Turn off propane tanks and unplug small appliances.
- Fill your car's gas tank.
- Talk with members of your household and create an evacuation plan. Planning and practicing your evacuation plan minimizes confusion and fear during the event.
- Learn about your community's hurricane response plan. Plan routes to local shelters, register family members with special medical needs as required and make plans for your pets to be cared for.
- Evacuate if advised by authorities. Be careful to avoid flooded roads and washed out bridges.
- Because standard homeowners insurance doesn't cover flooding, it's important to have protection from the floods associated with hurricanes, tropical storms, heavy rains and other conditions that impact the U.S. For more information on flood insurance, please visit the National Flood Insurance Program Web site at [www.FloodSmart.gov](http://www.FloodSmart.gov).

### What supplies do I need?



- Water—at least a 3-day supply; one gallon per person per day
- Food—at least a 3-day supply of non-perishable, easy-to-prepare food
- Flashlight
- Battery-powered or hand-crank radio (NOAA Weather Radio, if possible)
- Extra batteries
- First aid kit
- Medications (7-day supply) and medical items (hearing aids with extra batteries, glasses, contact lenses, syringes, cane)
- Multi-purpose tool
- Sanitation and personal hygiene items
- Copies of personal documents (medication list and pertinent medical information, proof of address, deed/lease to home, passports, birth certificates, insurance policies)
- Cell phone with chargers
- Family and emergency contact information
- Extra cash
- Emergency blanket
- Map(s) of the area
- Baby supplies (bottles, formula, baby food, diapers)
- Pet supplies (collar, leash, ID, food, carrier, bowl)
- Tools/supplies for securing your home
- Extra set of car keys and house keys
- Extra clothing, hat and sturdy shoes
- Rain gear
- Insect repellent and sunscreen
- Camera for photos of damage

### What do I do after a hurricane?



- Continue listening to a NOAA Weather Radio or the local news for the latest updates.
- Stay alert for extended rainfall and subsequent flooding even after the hurricane or tropical storm has ended.
- If you evacuated, return home only when officials say it is safe.
- Drive only if necessary and avoid flooded roads and washed-out bridges.
- Keep away from loose or dangling power lines and report them immediately to the power company.
- Stay out of any building that has water around it.
- Inspect your home for damage. Take pictures of damage, both of the building and its contents, for insurance purposes.
- Use flashlights in the dark. Do NOT use candles.
- Avoid drinking or preparing food with tap water until you are sure it's not contaminated.
- Check refrigerated food for spoilage. If in doubt, throw it out.
- Wear protective clothing and be cautious when cleaning up to avoid injury.
- Watch animals closely and keep them under your direct control.
- Use the telephone only for emergency calls.