

# Self-Driving Cars in Nigeria



***Who is to be Apprehended in  
the event of traffic Law  
Infraction?***

***Giving insight into the Corps activities through virtual Magazine***



In our last edition, we were very keen of what technology in the automobile is all about. In an attempt to complete the cycle, one area of interest this time around is what **“Driverless Cars”** are designed to achieved.

We shall ex-ray how it works, the advantage one will derived in the use of such vehicles, the likely inherent risk that may likely be associated with the use of such vehicles and finally it effects (positive or negative) on our job.

Technology in the automobile sector on daily basis is changing to reflect the reality of the time. For example, the road network is quite different from what we use to have before, the vehicles itself are being fitted with gadgets that are automated or digitalized for its operation, and even the enforcement by the various road traffic management agencies of recent time are being automated.

These therefore bring to mind, that FRSC as a lead agency in traffic management and administration needs to be ahead of the trend. The magazine will also examine the sterling qualities and capabilities of the EAGLE. We are made to understand that eagle is one of such bird that possesses all the qualities an average living creature is expected to have if such creature must weather the storm. This edition will expose these qualities with a view to providing lessons to be learnt by our readers.

Going by that long standing adage that says “Health is Wealth”, basic health tips /information that the various parts of the body needs is also being examined. Basically in the” life race”, this is a choice. There are key words listed with their corresponding matching words for your choice. Therefore, you are the CHOICE you make, LIFE is not a coincidence.

While the magazine promises to be impactful, we invite articles from all to enrich its content and pray that you shall be part of the success story for this magazine. Please kindly take responsibility in this COVID-19 Pandemic period and also think ROAD SAFETY.

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# Driverless Cars: What are they?

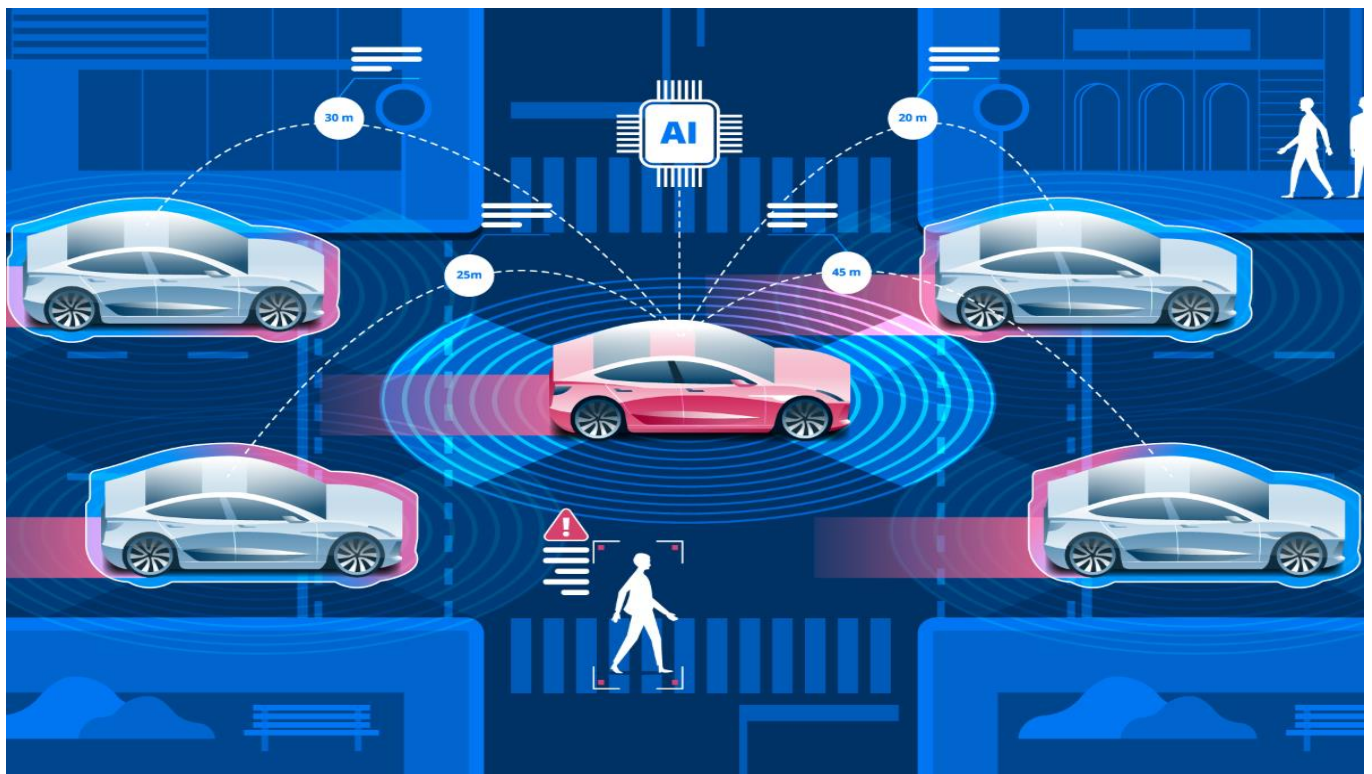


*A self-driving car, also known as an autonomous vehicle (AV), connected and autonomous vehicle (CAV), driverless car, robo-car, or robotic car, (automated vehicles and fully automated vehicles in the European Union) is a vehicle that is capable of sensing its environment and moving safely with little or no human input.*

The idea of self-driving vehicles dates back much further than Google's research in the present day. In fact, the concept of an autonomous car dates back to **Futurama**, an exhibit at the 1939 New York World's Fair.

General Motors created the exhibit to display its vision of what the world would look like in 20 years, and this vision included an automated highway system that would guide self-driving cars. While a world filled with robotic vehicles isn't yet a reality, cars today do contain many autonomous features, such as assisted parking and braking systems. Meanwhile, work on full-fledged autonomous vehicles continues, with the goal of making driving a car safer and simpler in the coming decades.

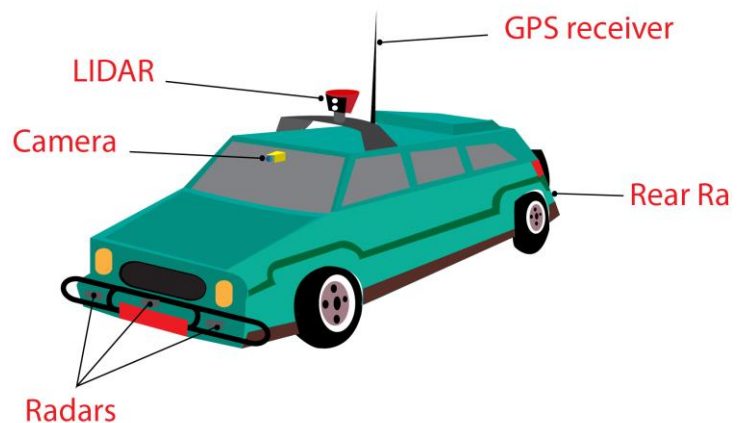
- **Written by Bonnie Gringer**



# BRIEF HISTORY OF AUTONOMOUS CARS

- In General Motors 1939 exhibit, Norman Bel Geddes created the first self-driving car, which was an electric vehicle guided by radio-controlled electromagnetic fields generated with magnetized metal spikes embedded in the roadway. By 1958, General Motors had made this concept a reality.
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- In 1977, the Japanese improved upon this idea, using a camera system that relayed data to a computer to process images of the road. However, this vehicle could only travel at speeds below 20 mph
- Improvement came from the Germans a decade later in the form of the **VaMoRs**, a vehicle outfitted with cameras that could drive itself safely at 56 mph. As technology improved, so did self-driving vehicles' ability to detect and react to their environment.

- The car's front end was embedded with sensors called pick-up coils that could detect the current flowing through a wire embedded in the road.
- The current could be manipulated to tell the vehicle to move the steering Wheel left or right.



## SELF-DRIVING CARS: COST AND BENEFIT

The costs and benefits of self-driving cars are still largely hypothetical.

More information is needed to fully assess how they'll impact drivers, the economy, equity, and environmental and public health.

1

Safety is an overarching concern. Many thousands of people die in motor vehicle crashes every year around the world. self-driving vehicles could, hypothetically, reduce that number—software could prove to be less error-prone than humans—but cybersecurity is still a chief concern.

2

Equity is another major consideration. Self-driving technology could help mobilize individuals who are unable to drive themselves, such as the elderly or disabled. But the widespread adoption of autonomous vehicles could also displace millions of people employed as drivers, negatively impact public transportation funding, and perpetuate the current transportation system's injustices.

3

Environmental impacts are a serious concern, and a major uncertainty. Accessible, affordable, and convenient self-driving cars could increase the total number of miles driven each year.

*Autonomous cars—five reasons they still aren't on our roads*

1. Sensors

2. Machine

3. The open road

4. Regulation

5. Social

**Source:** [Source: https://theconversation.com/autonomous-cars-five-reasons-they-still-arent-on-our-roads-143316](https://theconversation.com/autonomous-cars-five-reasons-they-still-arent-on-our-roads-143316)

There are indeed still fundamental challenges to the safe introduction of fully autonomous cars, and we have to overcome them before we see these vehicles on our roads. Here are five of the biggest remaining obstacles.

### 1. Sensors

Autonomous cars use a broad set of sensors to “see” the environment around them, helping to detect objects such as pedestrians, other vehicles and road signs. Cameras help the car to view objects. Lidar uses lasers to measure the distance between objects and the vehicle. Radar detects objects and tracks their speed and direction.

These sensors all feed data back to the car’s control system or computer to help it make decisions about where to steer or when to brake. A fully autonomous car needs a set of sensors that accurately detect objects, distance, speed and so on under all conditions and environments, without a human needing to intervene.

Lousy weather, heavy traffic, roads signs with graffiti on them can all negatively impact the accuracy of sensing capability. Radar, which Tesla uses, is less susceptible to adverse weather conditions, but challenges remain in ensuring that the chosen sensors used in a fully autonomous car can detect all objects with the required level of certainty for them to be safe.

To enable truly autonomous cars, these sensors have to work in all weather conditions anywhere on the planet, from Alaska to Zanzibar and in congested cities such as Cairo and Hanoi. Accidents with Tesla’s current (only level 2) “autopilot”, including one in July 2020 hitting parked vehicles, show the company has a big gap to overcome to produce such a global, all-weather capability.

### 2. Machine learning

Most autonomous vehicles will use artificial intelligence and machine learning to process the data that comes from its sensors and to help make the decisions about its next actions. These algorithms will help identify the objects detected by the sensors and classify them, according to the system’s training, as a pedestrian, a street light, and so on. The car will then use this information to help decide whether the car needs to take action, such as braking or swerving, to avoid a detected object.

In the future, machines will be able to do this detection and classification more efficiently than a human driver can. But at the moment there is no widely accepted and agreed basis for ensuring that the machine learning algorithms used in the cars are safe. We do not have agreement across the industry, or across standardisation bodies, on how machine learning should be trained, tested or validated.

## *Autonomous cars\_ five reasons they still aren't on our roads*

### **3. The open road**

Once an autonomous car is on the road it will continue to learn. It will drive on new roads, detect objects it hasn't come across in its training, and be subject to software updates.

How can we ensure that the system continues to be just as safe as its previous version? We need to be able to show that any new learning is safe and that the system doesn't forget previously safe behaviours, something the industry has yet to reach agreement on.

### **4. Regulation**

Sufficient standards and regulations for a whole autonomous system do not exist - in any industry. Current standards for the safety of existing vehicles assume the presence of a human driver to take over in an emergency.

For self-driving cars, there are emerging regulations for particular functions, such as for automated lane keeping systems. There is also an international standard for autonomous systems that includes autonomous vehicles, which sets relevant requirements but does not solve the problems of sensors, machine learning and operational learning introduced above -

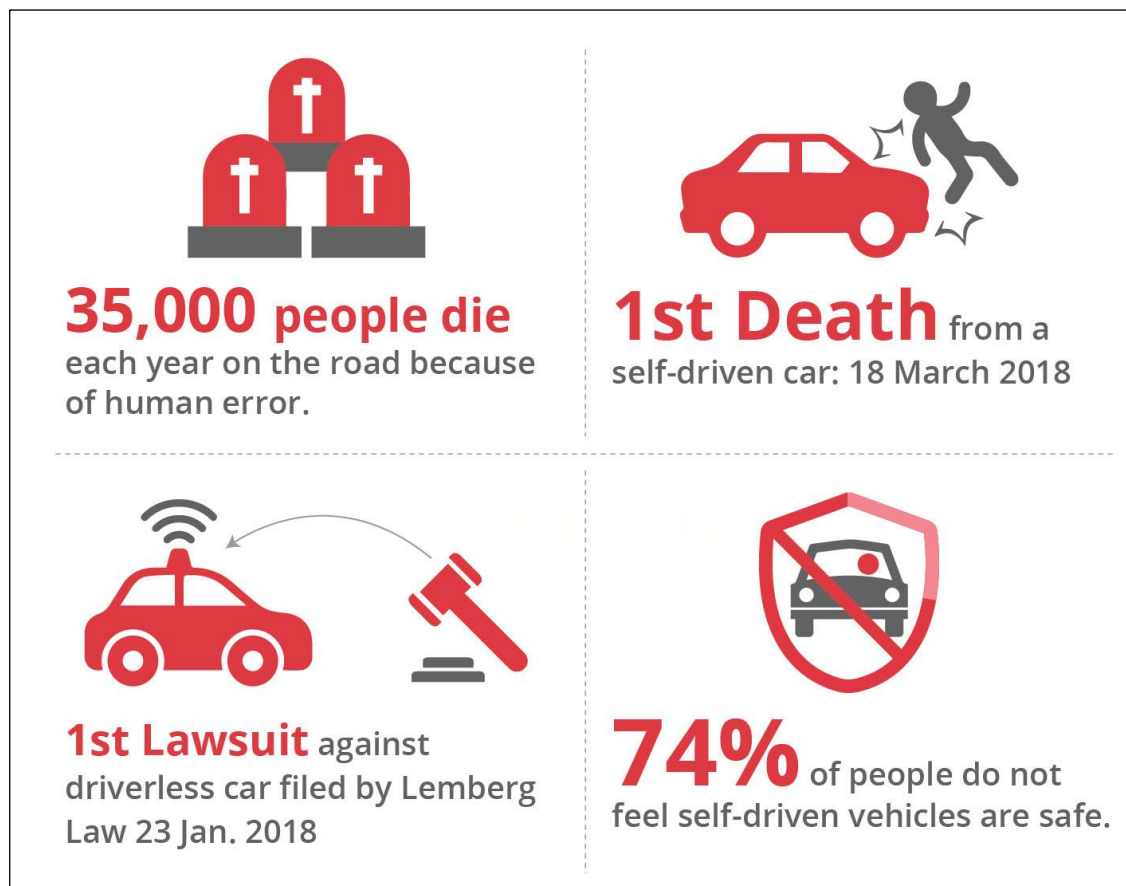
although it may in time. Without recognised regulations and standards, no self-driving car, whether considered to be safe or not, will make it on to the open road.

### **5. Social acceptability**

There have been numerous high-profile accidents involving Tesla's current automated cars, as well as with other automated and autonomous vehicles. Social acceptability is not just an issue for those wishing to buy a self-driving car, but also for others sharing the road with them. The public needs to be involved in decisions about the introduction and adoption of self-driving vehicles. Without this, we risk the rejection of this technology.

The first three of these challenges must be solved to help us overcome the latter two. There is, of course, a race to be the first company to introduce a fully self-driving car. But without collaboration on how we make the car safe, provide evidence of that safety, and work with regulators and the public to get a "stamp of approval" these cars will remain on the test track for years to come.

## Major Safety Issues with Autonomous Vehicles



## Is FRSC Prepared for Self Driving Cars in Nigeria?

Several questions arise on the subject of autonomous vehicles in Nigeria. Like the transformation in the telecommunications sector, Self-driving cars will as a matter of time become a reality in Nigeria. The question is when?

As Lead Agency, the FRSC will need to take steps towards integrating the aspect of future transportation into traffic law enforcement to determine legal implications and most importantly, safety issues.

While we look forward on this, we need to ponder on who exactly will be apprehended in the event of an autonomous vehicle (self-driving cars) violating a road traffic law when it becomes operational in Nigeria especially as there is no human being operating the vehicle. Or will it be the “**Registered Owner**”?

## Theme: **Drive Safe and Stay Safe**

As the Federal Road Safety Corps begins its nationwide end of the year campaigns with the theme; 'Drive Safe and Stay Safe', the Corps Marshal, Dr Boboye Oyeyemi has called on the motoring public to make the year 2020 'ember' months unique and crash free by adhering strictly to road traffic regulations. He stated among others, that road traffic crashes are avoidable and road crash free society is possible when best road practices are applied.

The Corps Marshal strongly cautioned motorists to note that the end of the year is not naturally tragic and are not in any way different from other months of the year, only that there seem to be an increase in vehicular movement witnessed during the season.

Debunking the myth that the last four months of the year commonly referred to as 'ember months' are hazardous for motorists, the Corps Marshal said that it is

very possible to drive without involving in a crash as long as motorists obey and adhere strictly to traffic laws and ensure constant maintenance of their vehicles.

The Corps Public Education Officer also said that in order to guide commuters on the path of safety and minimise the tendencies of crashes and gridlocks, the Corps Marshal issued out some salient travelling and safety advisories to travellers.

According to him, "With the rapid infrastructural development going on in the rail transportation sector under the present administration of President Muhammadu Buhari, commuters are advised to maximise that alternative means of transportation by patronising the train stations where available, as this will drastically reduce the pressure on the road transportation sector"



## *Special Advisory During this Ember Months*

He stated that the traveling public must start thinking about transport sharing as early as possible, to reduce pressure on the road as this will further reduce incidences of road traffic crashes. Family and friends are further admonished to plan and travel in phases, so as to avoid cluster of traffic during the ember months.

While speaking on the need to imbibe caution when choosing the vehicles to board especially for long distance trips, Dr. Boboye Oyeyemi admonished them to patronise safe and secure mass transit companies that have been duly certified to operate. This is to make room for redundancy plans in the event of vehicle breakdown.

He said that night trips are not as safe as day trips and travellers must try as much as possible to plan their trips within the hours of the day because of visibility and fatigue factors on the side of the driver.

The Corps Marshal also warned that all travelling protocols for COVID-19 must be strictly adhered to. Noting that the enforcement on 50% carrying capacity for all vehicles targeted at creating adequate physical distancing is still in place, and the Corps will not spare any fleet operator caught violating this directive.

He maintained that fleet operators must religiously follow all safety precautions, observe preventive measures against the dreaded virus, and comply with every bit of travelling directives already in place.

“Terminals and parks are expected to double up their efforts in providing adequate running water with soap and sanitisers in their parks and terminals. While maintaining physical distancing, all vehicles must have sanitisers inside them and avoid as much as possible, the use of air conditioner among others”

## **7** *Powerful Life Lessons from the Eagle*



*The eagle is a fascinating bird. Known for its power and ability to fly at high altitudes in the sky. It flies where no other bird can fly. Here is an article on the ways of the eagle, and highlight of lessons we can learn from them.*

# *Powerful Life Lessons from the Eagle*

## **1. EAGLES FLY ALONE OR WITH THEIR OWN KIND.**

**Life lesson:** Associate with people who are at your level, or who can help you to grow. Also, not everyone will share your vision or dream. Find people who think like you so that you can both dream and grow together. Don't waste your time with naysayers and negative people. And don't share your dreams with just anybody. Protect it your dream!

## **2. EAGLES HAVE EXCELLENT VISION AND CONCENTRATION.**

To catch their prey, they focus on it with laser like intensity, and set out to get it.

**Life lesson:**

Do the same with your goals. Focus on one thing to accomplish at a time. Give it your effort, time and energy. Focus and "set out to achieve it".

## **3. EAGLES FEED ON LIVE FOOD/MEAT.**

They don't eat dead animals.

**Life lesson:** Don't waste your energy and time beating a dead horse. Know when to say goodbye and let go. Keep your options open and your information current. Do

your research and preparation? Keep things current and keep them moving.

## **4. EAGLES LOVE THE STORM.**

They get excited when storm clouds gather. Why? They welcome the challenge it brings. They know the storm winds will lift them above the clouds. Above the clouds, they can rest their wings and become stronger.

**Life lesson:**

Get excited about the storms in your life. Challenges bring opportunities. We could see the opportunities, wrapped in our challenges if we weren't so busy, complaining and trying to avoid them. Embrace our challenges and learn from them. That's how we learn new skills, grow and get stronger. Is this easy to do? Of course not. But we can learn how to.

## **5. THE EAGLE TESTS THE LEVEL OF COMMITMENT BEFORE ENGAGEMENT.**

Before entering into a commitment, the female eagle tests her male suitors to establish his level of commitment.

**Life lesson:** It is wise to ascertain the commitment of people we intend to partner with. This is true in our personal as well as professional lives. Establishing trust is important in Relationship.

# *Powerful Life Lessons from the Eagle*

## **6. THE EAGLE IS A MASTER OF CHANGE MANAGEMENT.**

The mother eagle carefully prepares the nest for its eggs. When it is time for the eaglet to learn to fly, the mother begins to remove the comfort layers from the nest, exposing the pricks and sticks. She then throws the eaglets out of the nest. She does this repeatedly until the eaglet learns to fly. Out of fear, the eaglet jumps back in the nest, with each attempt, shrieking and bleeding from the pricks in the nest. The mother doesn't yield. To others looking on this may seem heartless. But there is a method to the madness. The process is repeated until the eagle eventually starts flapping its wings, getting stronger and stronger with each flap. Then — swoosh! Away it goes into the air, flying higher and higher. Rising above its challenges and pain. Life lesson: We must not become complacent in life; clinging to the old and familiar. We can only grow if we are willing to step out of our comfort zone. The thorns or pain in life are there to tell us that 1. There is nothing more for us where we are, and 2. It is time to move on, grow and spread our wings. Further, the people who genuinely care about us will not encourage us in our slothfulness and fear. While their treatment may seem unkind, it is for our ultimate good. Sometimes tough love is best. They don't want us to die in our nest!

## **7. REBIRTH INVOLVES DEATH OF THE OLD-SELF.**

The eagle has to make a painful decision at around age 40. Die or go through a painful process of rebirth which will extend its life for 30 more years. This process involves the painful task of knocking out its own beak and plucking out its talons so that new ones can grow. This entire process takes about 5 months to complete.

**Life lesson:** No pain, no gain. Many of us want success or change, but without the sacrifice, handwork, disappointments and heartbreak that comes with it. To survive and grow, we must be willing to change. And sometimes, we may even need to go a step further — a death of the old self and a total rebirth. Ending toxic relationships, leaving toxic jobs, getting rid of destructive habits, thoughts, traditions and mind-sets that no longer serve us.

Friends, to get to the next stage or chapter of our lives, careers, relationships, etc, let us study the ways of the eagle, and be willing to apply these principles to our lives. Change is within our power, if we only believe!

Thanks for reading!

Source: News24.com

# YOU ARE THE CHOICE YOU MAKE: LIFE IS NOT A COINCIDENCE



Image credit: thriveglobal.com

**Just  
A  
Thought**

## Do You Know That....

1. ADULT has 5 letters, so does YOUTH.
2. PERMANENT has 9 letters, so does TEMPORARY.
3. GOOD has 4 letters, so does EVIL.
4. BLACK has 5 letters, so does WHITE.
5. CHURCH has 6 letters, so does MOSQUE.
6. LIFE has 4 letters, so does DEAD.

7. HATE has 4 letters, so does LOVE.
8. ENEMIES has 7 letters, so does FRIENDS.
9. LYING has 5 letters, so does TRUTH.
10. HURT has 4 letters, so does HEAL.
11. NEGATIVE has 8 letters, so does POSITIVE.
12. FAILURE has 7 letters, so does SUCCESS.

13. BELOW has 5 letters, so does ABOVE.
14. CRY has 3 letters, so does JOY.
15. ANGER has 5 letters, so does HAPPY.
16. RIGHT has 5 letters, so does WRONG.
17. RICH has 4 letters, so does POOR.
18. FAIL has 4 letters, so does PASS.

19. KNOWLEDGE has 9 letters, so does IGNORANCE.

**Are they all by Coincidence? This means LIFE is like a double edged sword but the choices we make determine our destiny. Just a thought!**

**\*PLEASE TAKE GOOD CARE OF YOUR BODY PARTS: EVERYTHING MAY NOT BE SPIRITUAL\***



1. The **\*STOMACH\*** is injured when you do not have breakfast in the morning.
2. The **\*KIDNEYS\*** are injured when you do not even drink 10 glasses of water in 24 hours.
3. The **\*GALLBLADDER\*** is injured when you do not even sleep until 11 o'clock pm and do not wake up 6am to exercise your body but sleep to the sunrise.
4. The **\*SMALL INTESTINE\*** is injured when you eat too cold and stale foods.
5. The **\*LARGE INTESTINES\*** are injured when you eat more fried and spicy foods.
6. The **\*LUNGS\*** are injured when you breathe in smoke and stay in polluted environment of cigarettes.
7. The **\*LIVER\*** is injured when you eat heavy fried food, junks, and fast foods.
8. The **\*HEART\*** is injured when you eat your meal with more salt and cholesterol.
9. The **\*PANCREAS\*** is injured when you eat sweet things because they are tasty and freely available.
10. The **\*Eyes\*** are injured when you work too long in the light of mobile phone and computer screen in the dark.
11. The **\*Brain\*** is injured when you start thinking negative thoughts and anxious too often.

**\*All these body parts are not available in the market. So take good care of yourself and keep your body parts always healthy.**