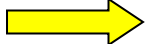
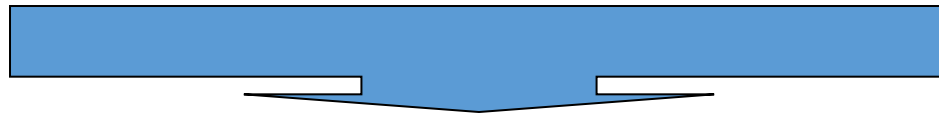


TO SUCCEED IN AQUARIUM= THE PROCESS MORE THAN 60 DAYS
WITHOUT THE MEDICAL AGENTS OR DRUGS IN THE AQUARIUM

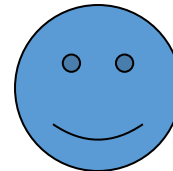
the generally preference = immediately to be rescue the sick fish/fishes
and then purchase new fish/fishes


But  to take preventive measures,
knowledge and experience about aquarium and the
species of fishes and compatible species of fishes




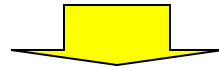
to prevent a great many of diseases

Result



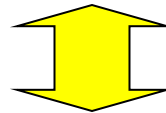
 **most important** : watch your fishes and know what their normal behavior and appearance is, if you don't know what normal is, you can't know what sick is

 **most important** : never buy a sick fish from a store, especially don't buy fishes and plants from a tank




to observation two important criterions

- 1) if any fish shows signs of disease in the tank
- 2) or there are medical agents and drugs in the tank



chemical substances are made aquarium water colorful




 most important : before purchasing a fish

ask how long the fish have been in the store

new arrivals may be carrying diseases that have not shown up yet


it is better to wait at least two weeks before purchasing the fish


for reliable quarantine

this time is enough for reliable quarantine

Some of the most common factors may be effecting the healty of a fish

choosing fishes


capacity of aquarium  number of fishes

numbers of male and female fishes

water temperature

water pH



cleaning aquarium : cleaning filter

cleaning bottom of aquarium  pebble or small stones,
sand

 bottom water of aquarium pulling with a hose or siphon



 **most important:** the volume withdraw of water

 no diseases in aquarium  the volume of withdraw water is not more than 25 % total volume

choosing and intensity of water plants

lighting → time and type

fish nutrition → type of feed (dry or live feed)
and withdraw and portion

toxic and garbage substances in the aquarium

New fish and plants → these can carry diseases into a aquarium



intensity of fish leading appeared the diseases in aquarium

intensity is cause of → greatly garbage sustances
insufficient oxygen
to discord(fight) between species
stress
leading to contact in fish group
to fight for feed

curious and particular (fastidious) hobbyist takes notes to each various knowledge about the fishes



watch your fishes and know what their normal behavior and appearance is, if you don't know what normal is, you can't know what sick is



a good hobbyist must watch daily and weekly observations

generally, diseases are occurred one or a few fish and short time (acute) or long time (chronic)

A good hobbyist  same as quickly to be thicking

 most important : one disease fish = sickly aquarium



pathogens are almost present in aquarium and disease agents are infected to water by porter fish / fishes

some generally symptoms of a sick fish :

the motion style become different

- the fish swims slowly or speedy
- the fish floats, sinks, wirls, or swim sideways
- the fish excessive shivering (moves from side to side without forward)
- the fish is shown a normally active and abnormally active respectively
- the fish is very active

normal behaviour become different

- the fish suddenly bloats up, and it's not due to eggs or young
- the fish is kept stones, decorations and plants in long time
- the fish is scratching against aquarium decorations
- the fish is lean to one side

some abnormally morphological signs

- fins are held abnormally closed to body, and ragged
- there are visible spots, lesions, or different colors (red, white, yellow, grey, green etc.) patches on the body
- fins are ripped
- abdominal region is swollen

nutrition of fish become different

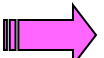
the fish eats either too small or nothing

the fish refuses its usual food for more than two days

breath style become different

the fish gasps at the surface of water

number and volume of breath are increase

flashing  scraping up against the decorations in the tank. Many fish do this occasionally, but when they do it continuously you need pay attention

head standing  swimming with the head down

tail standing  swimming with the tail down

listing  leaning to one side or the other

not forgetting : above symptoms are generally, but these are shown a problem in the aquarium

Some of the general symptoms of a sick fish

Motion decreases, hiding, escape

Abdomen can be swollen

Fish can lie on the side

Changes in the surface of the body

Forward - backward and irregular swimming

Rubbing bottom or rubbing rocks

Increased number and frequency of respiration

Less food or no food

It should not be forgotten; these are very general symptoms

But it's still a problem

Quarantine Aquarium

Purpose; 1) Treatment of sick fish

2) waiting for new fish and plants to remain before putting in the aquarium

Newly acquired fish can be kept in the quarantine aquarium depending on the breed and timing .This period may be prolonged, but most bacterial, viral and parasitic diseases complete the prepatent periods during this period.

The size or volume of the quarantine tank varies depending on the purpose and density of the fish

There should be no sand and gravel in the bottom

A non-flowing filter system is used. In the excessive flowing sick fish is more tired

The water temperature must be at the optimum level and must be fixed

The amount of O₂ in the medicated water decreases.

Air flow should be regular

There must be hiding places where the fish can feel safe

Lighting should be done at regular intervals

Vitamin complexes must be given

Quarantine aquarium water should change everyday or every other day

The materials used in the quarantine tank should not be used in other aquariums. If used, it must be sterilized.