
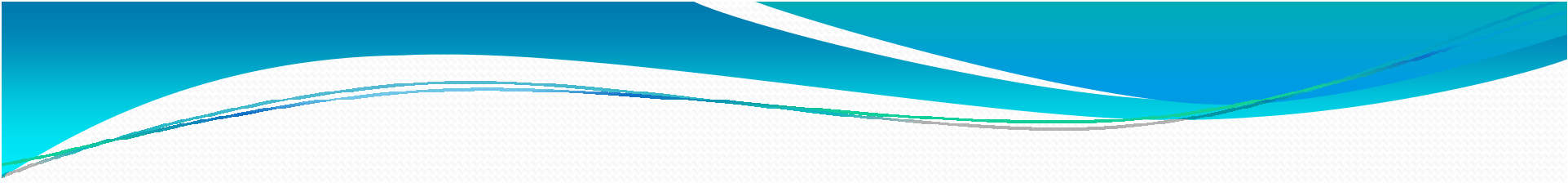


# Sanitary arrangements for fairs, festivals and camps

# Learning objectives

1. To describe historical background
2. To describe in details the measures to safeguard public health at fairs, festivals and camps

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- Outbreak of cholera in Puri
  - An epidemic at Hardwar mela in 1867 spread to Persia and Soviet Russia and costed millions of lives
  - GOI – 1912 – Provincial pilgrim committees to examine sanitary requirements of pilgrim centres in the country and to recommend measures to be adopted by the festival authorities for the safeguard of public health

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- Adequate provisions for safeguarding public health at pilgrim centres are of national and international importance.
  - Sanitary arrangements for fairs, festivals can be discussed under the heads:
    - administrative measures including finance
    - sanitary measures
    - Communication
    - medical services

# Administrative measures

- Large festivals: committee appointed, including representatives of the local bodies, temple authority, railways, police department
- Planning in advance about each and every minute details
- Technical and supervisory staff from local and state authorities
- Mobilizing services of the voluntary organizations

# Finance

- Collection of money from:
  - Taxation on shops, carts, vehicles, food establishments, lodging houses
  - Pilgrimage tax on railway tickets
  - Temple donations
- Utilized for the provision of:
  - Sanitary facilities
  - Medical facilities

# Sanitary measures

## 1. Safe water supply

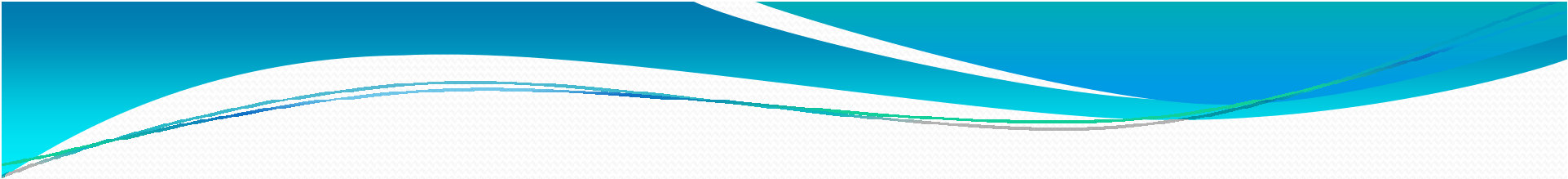
- Must not be contaminated
- When possible, piped filtered supply through taps
- Or, tube well @ 1/200 person
- Or, existing dug wells – covered, fitted with hand pumps after chlorination
- All sources: daily chlorination



## 2. Conservancy services

- Rubbish conservancy
  - Swept at least thrice a day
  - Disposed at a distant place by burning
  - Collection: large dust bins for urban; temporary pits for rural



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- Night soil conservancy
    - Permanent pilgrim centres: sewerer latrines
    - Shallow trenches should never be advocated
    - Well or pit latrine should not be within 30 feet of any shallow water source
    - Septic tank latrines
    - Spraying of DDT twice daily for prevention of fly breeding



### 3. Wholesome food supply

- All norms or regulations must be strictly followed
- Food inspector

### 4. Accommodation

- All sanitary measures and guidelines for healthful housing must be strictly followed even if the accommodation is temporary

# Medical services

- One medical personnel on duty for fairs or festivals having more than 5000 visitors in a day
- A properly located and well equipped dispensary including preparedness to meet medical emergencies
- Insecticides, disinfectants
- Demand for compulsory production of immunization certificates at specific places
- Health workers
- Health education
- Preparedness to control any epidemic situation

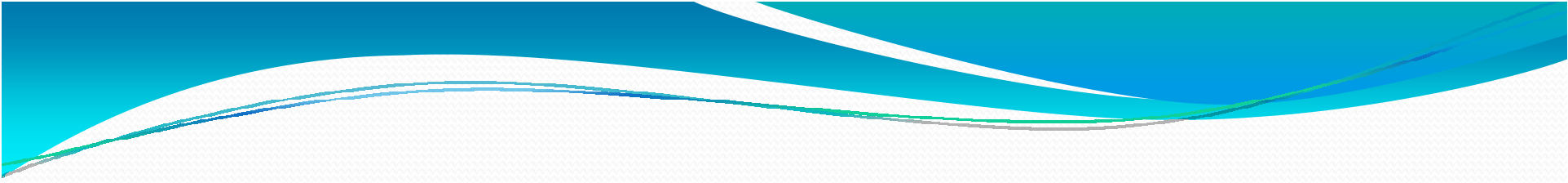
# Camp Sanitation

In view of the fact that camps and temporary settlements have been freely set up all over the country, the following points require consideration with reference to camps:

1. Camp site
2. Accommodation and equipment
3. Water supply
4. Food and cooking arrangements
5. Disposal of refuse, excreta and waste water


# 1. Camp site

- On a high ground not subject to floods or water logging
- Good approach from the main road
- Not too close to a *bazar* or congested area, but facility for transport and easy accessibility to supplies should be kept in mind

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- Ground and surroundings: dry and free from dense vegetation
  - Hollows and excavations should be filled up to prevent mosquito breeding
  - Facility for obtaining water

## 2. Accommodation and equipment

- Tents: risk of overcrowding
- Tent walls: must be looped up daily to allow fresh air and sunlight to enter
- Trenches: cut round the tent to hold rain water and to provide surface drainage
- Lay out of the camp should be properly planned after a survey of the site

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- The front of the tent should face the prevailing wind
  - Sleeping accommodation in front with kitchen and mess nearby
  - The conservancy area should be concentrated, not more than 200 yards from the most distant sleeping place and not in a place likely to pollute the water supply
  - Bathing and water point: away from conservancy, with proper drainage to prevent water logging




## 3. Water supply

- Not only safe, chances of accidental contamination should also be nil
- Whatever the source, water should be examined bacteriologically before use and disinfected
- Wells: covered, water drawn with pumps
- No animals should be allowed to be watered from the same source
- Transport of water from source to consumption site: all vessels kept cleaned and covered
- Chlorination must be done



## 4. Food and cooking arrangements

- Fresh food daily
- All milk should be boiled
- Perishable foods: refrigerate if available
- Kitchen: well lighted, ventilated, fly proofed and with a smoke outlet
- Suitable provision for storage: clean, protected from rodents and flies

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- Sullage: made to pass into pits
  - Provision for washing the cooking utensils
  - Provision of ample supply of hot water
  - Cooks and other food handlers: should not be suffering from communicable diseases or should not be the carriers of the same
  - Cleaning of utensils: strictly not with earth, instead baked sand stored in a clean tin can be used



## 5. Disposal of refuse and excreta

### a) Dry refuse:

- from kitchen and other parts of the camp
- Daily collected in sand bags by concerned persons
- Refuse like veg. peels, remnants of food: land filling or deep burial or incinerator



## b) Liquid waste:

- Human and animal urine, kitchen sullage, ablution water
- Soakage pit can be used



c) Faeces:

- Shallow trench should be avoided
- Deep trenches: should be made fly proof
- At least 50 yards away from the source of water and kitchen
- Always be super structured
- Where convenient, bored hole, well or pit latrine can be provided
- Conservancy staff
- Ample water
- Approach: clean, lighted at night

# Stable litter

- Horse manure, cow dung
- Daily collection and complete removal to prevent infestation by flies and other biting insects
- Incineration or deep burial



# Good organization and effective coordination from the beginning



# SWIMMING POOL SANITATION

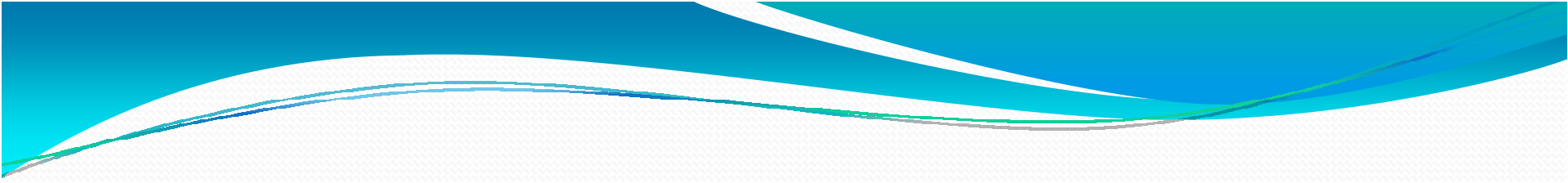


## ***IMPORTANCE OF SWIMMING POOL SANITATION :***

- The swimming pool water is a source of infection to the swimmers if the water is contaminated.
- The water in turn gets infected if the swimmers do not abide by hygiene guidelines;
- thus causing skin., ENT, Eye and GIT, URTI infections to the users.

## **SWIMMING POOL SANITATION RECOMMENDED MEASURES:**

- 1) There should not at any point of time be, over crowding in the pool. An area of 2.2 m<sup>2</sup> is recommended per swimmer.
- 2) Water clarity : Water should be clean so that main drain gate is visible from the deck. A rapid sand filter is used for continuous filtration of the water which takes about 6 hours. Fifteen percent of the total water should be replaced by fresh water daily.
- 3) Temperature : Bather preference, but not to exceed 40°C.

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- 4) Cleanliness : Water should be free from sediment, floating algae, visible dirt algae.
  - 5) Equipment : Kept in good repair, drain gates secured in place.
  - 6) Safety equipment : Shepherd's hook, ring buoy with attached rope should be available.



## 7) Pool Rules :

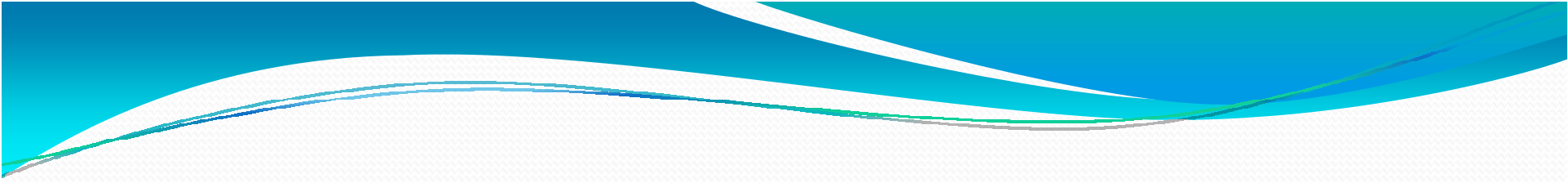
Person's health : Person entering in pool should be free from communicable diseases such as skin, eye, ear, nose, throat infection. A medical certificate to that effect may be obtained before permitting entry.

- Before entering the pool : all users have to take cleansing shower, empty bladder.
- In the pool : Users should refrain from spitting and blowing the nose in the pool or spouting water.



## 8) Disinfection of Pool Water :

- The pool is disinfected by continuous maintenance of 1 mg/lit of free chlorine.
- Recommended free chlorine levels :
  - Free chlorine : 3 - 5 mg/Lt in spas and hot tub.
  - 1 - 5 mg/Lt in all other pools.
- Bromine :
  - 3 - 5 ppm in spas and hot tub.
  - 1.5 - 5 ppm in all other pools.

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- 9) pH value : For maximum efficacy of chlorine action, pH of pool water maintained between 7.2 - 7.8.
  - 10) Biological Recommendations : All bacteriological quality of water should be as good as drinking water standards. Water should be tested for bacteria in state approved laboratory and should be done at least once a month.



## 11) Eliminate drain suction hazards

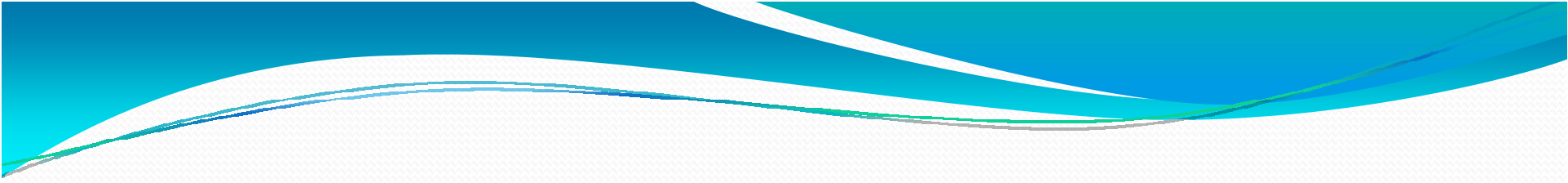
- Inspect pools daily to ensure that drain covers are in good condition and securely attached.
- Do not operate shallow pools with a single main drain suction outlet.
- Post a sign " Warning " - to prevent serious injury. Do not allow children in swimming pool if drain cover broken or missing.





## **Swimming Pool Safety Requirements :**

- To prevent the accidents in pool and pool area following measures should be fulfilled.
- First Aid Kit : should be available.
- Life guard stand : Elevated platform and chain for 2250 sq. feet area.
- Gas mask : for workers in chlorinator room.

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- Safety Equipments :Ring buoy. And Life pole of 10 feet length
  - Hours of operation only after sunrise and until sunset, unless pool has internal lights.
  - Maintenance, operation and sanitation of disinfection equipments regularly.
  - Pool enclosure required which is not less than 4 feet in height.



# Thank You