

# Shark Behavior Workshop

Ahmed Mamdouh

## Outline of Workshop

- Personal introduction
- Introduction to sharks
- Shark biology
- Shark senses
- Risk assessment
- Sharks of the Red Sea
- Shark behavior and common myths
- Shark behavior and diving encounters
- Oceanic whitetips safety guidelines

## Personal Introduction

Presenter background and experience  
Outline of workshop

## Introduction to sharks

History and evolution of sharks  
Sharks in pop culture

## Shark biology

What defines a shark's anatomy?  
Cartilaginous skeleton  
Lack of swim bladder  
Gill slits and respiration  
Reproduction  
Types of shark teeth and jaws  
Skin

## **Shark senses**

Overview of shark senses

Range of senses

Senses

- Hearing
- Smell
- Sight
- Lateral line organ
- Ampullae of Lorenzini
- Touch
- Taste

Experience of shark perception

## **Risk assessment**

Risk of shark attacks

Where and when do shark attacks happen

Factors increasing risk

- Food in the water
- Irritation of senses
- Competition for food
- Individual personality
- Conditioning
- Lack or loss of respect

General steps to minimize risk for all water activities

## **Sharks of the Red Sea**

This section explores the most common species of sharks encountered in the Red Sea, each with its distinct features, global presence, size, lifespan and temperament.

## **Shark behavior and common myths**

Sharks different hunting patterns and prey

Adaptations

Common myths

- Mindless eaters
- Sharks must constantly swim
- Attracted to human blood
- No attack means no sharks
- Sharks have no predators

## **Shark behavior and diving encounters**

Language of fins

Body language and posture

Factors for different manifestations of interaction patterns

- Shark species
- Size
- Environmental conditions
- Ability to use their senses

Shark interaction zones:

- Green: awareness zone
- Yellow: curiosity zone
- Red: encounter zone
- Alarm: action zone

## **Oceanic whitetip sharks diving safety guidelines (guests and guides)**

Important notes

- Shark diving is not risk free, but do not scare divers - explain and brief calmly
- Environmental awareness - constantly read the environmental factors
- Who has the advantage?
- Always respect the shark as a wild predator in natural habitat
- Never touch a shark - avoid escalation of encounter
- Avoid being mistaken for potential prey

Guidelines for divers (should be explained by dive guide) for diving with oceanic whitetip sharks - underwater

- Remain calm and breathe calmly
- Avoid rapid and erratic movement
- Do not swim away
- Maintain buoyancy and depth (5m to 10m depth range)
- Stay in a vertical position
- Always face the nearest shark - maintain eye contact
- Stay close to dive buddy and group
- Move closer to the reef if needed
- Calmly and slowly use fins or camera if available to block the shark
- Divers should watch for signals and instructions from guide

Guidelines for divers (should be explained by dive guide) for diving with oceanic whitetip sharks - entries, exits and at the surface

- Swimming and snorkeling are not allowed in areas with oceanic whitetips
- Jump in first and watch entry of divers - maintain control and awareness
- Negative entries to 5m depth - minimal time on the surface
- For exiting, group at safety stop depth before exiting
- Evaluate conditions - 1 by 1 or maximum 2 by 2 exits
- Efficiently exit the water, possibly collect inflated BCD after exit
- Monitor situation and environment while divers exit

Guidelines for dive guides to follow while on shark dives

- Explaining swimming and snorkeling regulations in areas with sharks
- Always be the first to enter the water to control the situation
- Entry and exit techniques
- Minimize time on the surface for all divers
- Dive group organization and control
- Dive guide's position and group position
- Guide should calmly maintain control of the situation
- Communicate frequently and clearly with divers
- Controlling exits and numbers depending on the situation, and how to organize entries and exits
- Explaining efficient exits
- Monitoring the diver exits