RESZON

STRONGYLOIDIASIS IgG4 RAPID TEST

A FAST, RELIABLE & AFFORDABLE Rapid Test to Detect Strongyloidiasis

ACCURATE Diagnostic Performance

RELIABLE Proven Across Diverse Settings

SIMPLE Easy to use

RAPID Results in 15-25 Minutes

EQUIPMENT-FREE No Special Equipment Needed

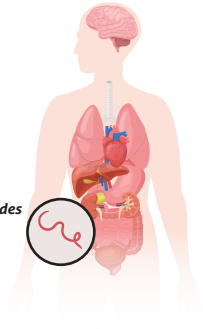
AFFORDABLE Ideal for Resource-Limited Settings

STRONGYLOIDIASIS: A SILENT BUT DEADLY THREAT

Strongyloides stercoralis is a parasite that causes strongyloidiasis worldwide with more than 600 million people in tropical and sub-tropical areas estimated to be infected.[1]

It often establishes a chronic, potentially lifelong infection in immunocompetent people, which may progress to hyperinfection syndrome in those who become immunosuppressed.

Early detection of *Strongyloides* infection in at-risk individuals before immunosuppression is crucial for reducing mortality.



STRONGYLOIDIASIS AT A GLANCE

A chronic human parasitic infection mainly caused by *Strongyloides stercoralis.*

It is a globally prevalent soil-transmitted helminth (STH).

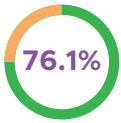
Global Impact

613.9

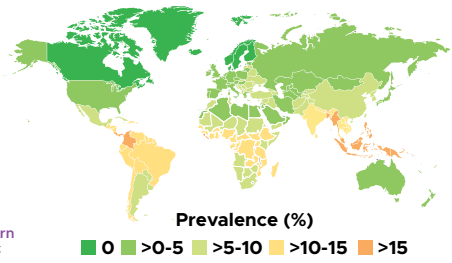
million people

infected worldwide (estimated in 2017)[1]

Most Affected Regions



of global infections are concentrated in three WHO regions[1]



Estimated strongyloidiasis prevalence (STG-PR) for 2017, as predicted by the best statistical model[1]

HOW THE TRANSMISSION OCCURS?

How Infection Occurs

1. Larvae in soil

2. Larvae penetrate skin (e.g., barefoot exposure)

3. Reach the intestine, develop into adult worms and multiply

4. Some larvae reinfect the body (autoinfection)
   → Long-term infection

Key Feature: Autoinfection

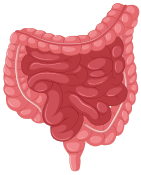
The parasite can reinfect the body internally, allowing infection to persist for years-even decades — if untreated.

SYMPTOMS OF STRONGYLOIDIASIS

- Strongyloidiasis may cause intermittent symptoms affecting the gastrointestinal tract (abdominal pain and intermittent or persistent diarrhoea), lungs (cough and wheezing) or skin (pruritus, urticaria, or larva currens).
- Asymptomatic individuals may harbour the parasite for years without knowing they are infected.

SYMPTOMS CAN BE INTERMITTENT AND AFFECT

INTESTINE



- Abdominal pain
- Diarrhoea (on-and-off or persistent)

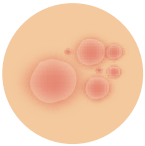
Symptoms may come and go.

LUNGS

- Cough
- Wheezing

Respiratory symptoms may be mild or recurring.

SKIN



- Itching
- Rashes or hives (urticaria)
- Larva currens

Skin symptoms can flare up at time

HIGH MORTALITY RATE IF UNDIAGNOSED

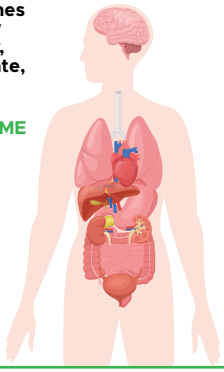
- Mortality rates in hyperinfection syndrome and disseminated strongyloidiasis can reach almost 90%
- Death often occurs due to delayed diagnosis
- Preventable with early screening & treatment

THE DANGER: HYPERINFECTION & DISSEMINATED INFECTION

When an infected person becomes immunosuppressed, particularly following corticosteroid therapy, larval proliferation may accelerate, leading to rapid progression to:

HYPERINFECTION SYNDROME
Massive increase in larval burden within the gastrointestinal tract and lungs

DISSEMINATED STRONGYLOIDIASIS
Larvae spread beyond the gut to multiple organs



Potential complications include:

- Larvae invade lungs, liver, brain and other organs
- Translocation of enteric bacteria, leading to sepsis
- Multi-organ failure
- **Highly fatal** if not diagnosed and treated early[2,3]

WHO ARE AT HIGHER RISK OF SEVERE DISEASE (HYPERINFECTION/DISSEMINATED STRONGYLOIDIASIS)?

1 IMMUNOSUPPRESSED INDIVIDUALS

- Patients infected with human immunodeficiency virus (HIV) or human T-lymphotropic virus type 1 (HTLV-1)
- Patients receiving chemotherapy for cancer
- Solid organ transplant recipients
- Hematopoietic stem cell (bone marrow) transplant recipients
- Advanced chronic kidney disease (CKD)
- Patients with autoimmune or inflammatory diseases receiving immunosuppressive drugs (e.g. rheumatoid arthritis)
- Patients with severe malnutrition or other causes of impaired cellular immunity

2 PATIENTS RECEIVING CORTICOSTEROID THERAPY

Both short-term and long-term systemic corticosteroid therapy can increase the risk of *Strongyloides* hyperinfection syndrome

3 PATIENTS WITH HAEMATOLOGICAL MALIGNANCIES

Leukemia

Lymphoma and other haematological malignancies

THE CLINICAL DIAGNOSTIC CHALLENGES

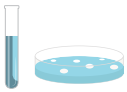
Stool microscopy is often used for laboratory diagnosis; however, it is insensitive due to low and intermittent larval output. Concentration and culture techniques can improve the detection but are time consuming, labour intensive and need fresh stool containing live larvae. Serology is thus often used as a diagnostic tool for strongyloidiasis.

STOOL MICROSCOPY

Often used in laboratory diagnosis

Insensitive due to low and intermittent larval output

CONCENTRATION & CULTURE TECHNIQUES



Can improve detection

Time consuming, labour intensive and need fresh stool containing live larvae

SEROLOGY

Often used as a diagnostic tool for strongyloidiasis

INTRODUCING THE NEW POCT SOLUTION FOR QUALITATIVE DETECTION OF STRONGYLOIDIASIS

RESZON

STRONGYLOIDIASIS IgG4 RAPID TEST

MDA Reg. No.: IVDC7526826-233770

RESZON® Strongyloidiasis IgG4 Rapid Test is designed to close the diagnostic gap in the detection of strongyloidiasis. Aligned with the World Health Organization 2021–2030 roadmap for neglected tropical diseases, it fulfills the **"ASSURED"** criteria:

Affordable, Sensitive, Specific, User-friendly, Rapid & Robust, Equipment-free, and Deliverable, making it ideal for screening at-risk populations and use in resource-limited settings.

A	S	S	U	R	E	D
AFFORDABLE	SENSITIVE	SPECIFIC	USER-FRIENDLY	RAPID & ROBUST	EQUIPMENT-FREE	DELIVERABLE

PRODUCT SPECIFICATION

Sensitivity
96.6%

Test time
15 minutes (serum/plasma)
25 minutes (whole blood samples)

Sample volume
35 µl

Sample type
Human Whole Blood / Serum / Plasma

Specificity
91.2%

Storage
2-30°C

Kit
25 tests

Shelf life
24 months

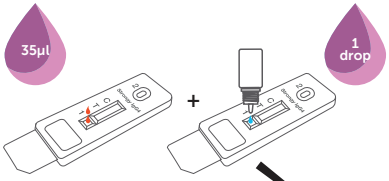
REAGENTS AND MATERIALS SUPPLIED

- RESZON® Strongyloidiasis IgG4 Rapid Test Cassette (individually sealed aluminium pouch with a desiccant)
- Assay buffer
- Optional: Disposable dropper, alcohol swab and safety lancet
- Instruction for Use (product insert)

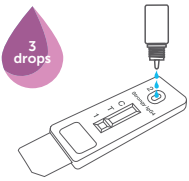
STRONGYLOIDIASIS INFECTION

ASSAY PROCEDURE

(A) FOR WHOLE BLOOD SAMPLE

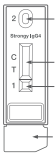


Release 35 µl of whole blood onto the sloping wall of the square well, allow the blood to flow from the slope to the sample pad. Then followed by 1 drop of assay buffer to the same **square well.**



Add 3 drops of assay buffer to the **oval well** on top. Drop-by-drop and let it sip through the pad in between the drops.

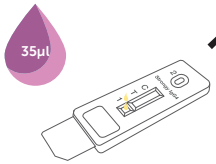
Read result within **25 mins** for whole blood samples



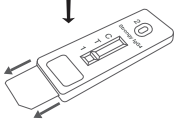
Let the sample flow until it reaches the area C before proceeding to the next step.

(If needed, cassette may be tapped gently on the table to facilitate sample flow.)

(B) FOR SERUM AND PLASMA SAMPLE



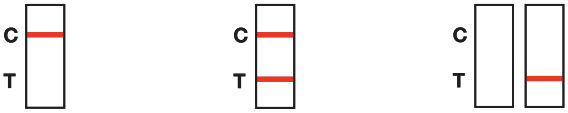
Add 35 µl of serum/plasma to the **square well** (add 1 drop of assay buffer if sample does not wick up after 2-3 mins)



Pull clear tab until resistance is felt

Read result within **15 mins** for serum/plasma samples

RESULT INTERPRETATION



ORDERING INFORMATION

RESZON® STRONGYLOIDIASIS IgG4 RAPID TEST		
Product Code	**Description**	**Packing Size**
RSS-RD0101-25	RESZON® Strongyloidiasis IgG4 Rapid Test	25 tests / kit
RSS-RD0101A-25	RESZON® Strongyloidiasis IgG4 Rapid Test (with disposable dropper)	25 tests / kit
RSS-RD0101B-25	RESZON® Strongyloidiasis IgG4 Rapid Test (with disposable dropper, alcohol swab and lancet)	25 tests / kit

WHY CHOOSE RESZON® STRONGYLOIDIASIS IgG4 RAPID TEST KIT?

High Diagnostic Performance for Accurate Detection

- Sensitivity: **96.6%** supports early detection
- Specificity: **91.2%** reliable screening results

Proven Performance Across Diverse Settings

- Evaluated across multiple countries (Switzerland, Thailand, Iran, Malaysia) and populations[2,3,4,5]
- Demonstrates good and consistent performance
- Suitable for diagnosis, screening, and public health programs

Suitable for Clinically Challenging Cases, such as Patients with

- Unexplained eosinophilia
- Chronic gastrointestinal symptoms
- Recurrent or unexplained skin manifestations
- Asthma or respiratory symptoms with eosinophilia
- Unexplained Gram-negative sepsis

Fast Results

- Within 15 minutes (serum/plasma samples)
- Within 25 minutes (whole blood samples)

INTENDED USERS & CLINICAL APPLICATIONS

HOSPITALS & CLINICAL LABORATORIES
routine and pre-immunosuppression screening

PRIMARY CARE & COMMUNITY CLINICS
rapid, on-site clinical decision support

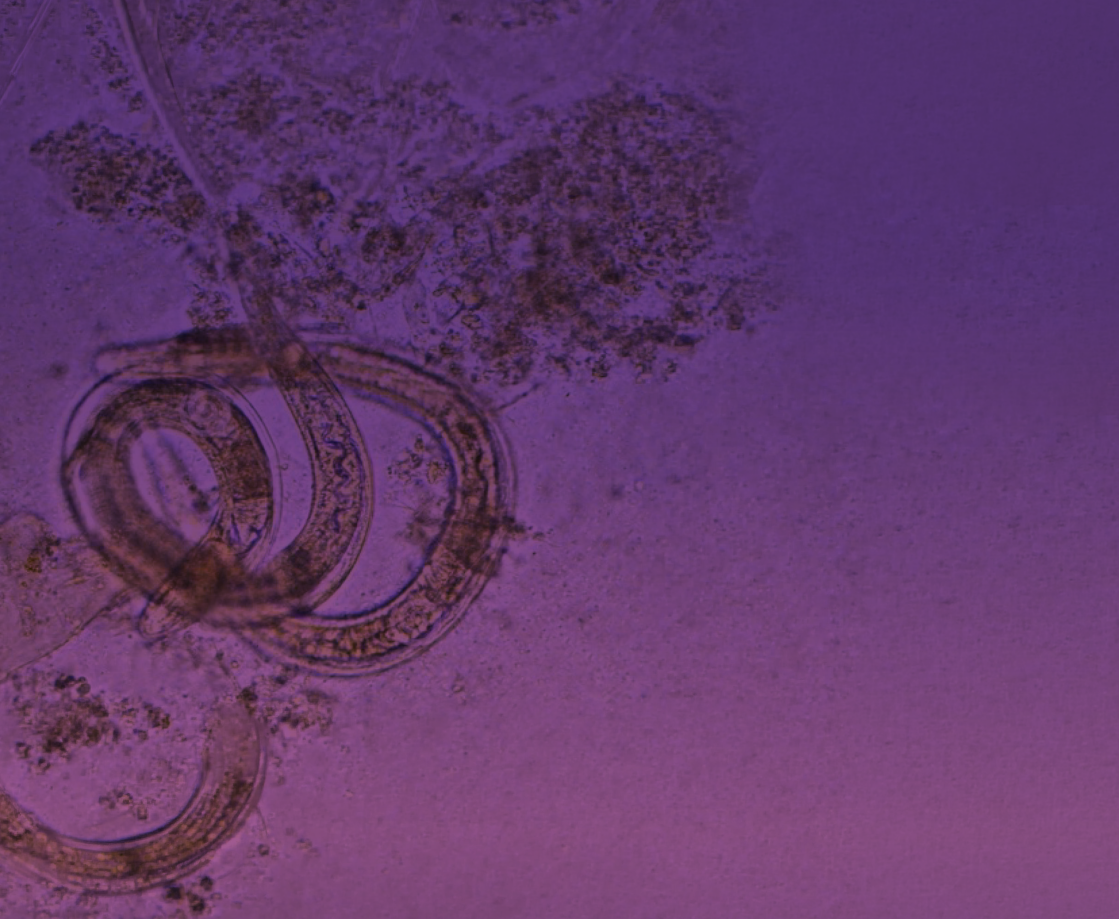
PUBLIC HEALTH & SCREENING PROGRAMS
population-level surveillance and control

MIGRANT, REFUGEE & TRAVEL MEDICINE CLINICS
migrants, refugees, and travellers with endemic exposure

TRANSPLANT & ONCOLOGY CENTRES
risk mitigation before immunosuppressive therapy

NGOs & OUTREACH TEAMS
field screening in resource-limited settings

RESEARCH & ACADEMIC INSTITUTIONS
epidemiology studies



References:

1. Dora Buonfrate, Bisanzio D, Giorli G, Odermatt P, Fürst T, Greenaway C, French M, Reithinger R, Gobbi F, Montresor A, Bisoffi Z. *The Global Prevalence of Strongyloides stercoralis Infection*. Pathogens. 2020;9(6):468. doi:10.3390 /pathogens9060468.

2. Ashiri, A., Rafiei, A., Noordin, R., Anuar, S.A.,Teimoori, A., Ansari-Moghaddam, B., Beiromvand, M., 2025. *Strongyloides stercoralis prevalence and diagnostic efficacy of an IgG4 rapid test in an eosinophilic population in Khuzestan Province, southwestern Iran.* Parasit Vectors 18, 291.

3. Nickel B, Krebs C, Ruf MT, Anuar NS, Noordin R. *An evaluation of a lateral flow rapid diagnostic test for Strongyloides stercoralis infection.* Acta Trop. 2024; 258:107336.

4. Wongphutorn P, Noordin R, Anuar NS, Worasith C, Kopolrat KY, Homwong C, Tippayawat P, Techasen A, Pitaksakurat O, Sithithaworn J, Eamudomkarn C, Sithithaworn P. *Examination of Diagnostic Performance of New IgG4 Rapid Test Compared with IgG- and IgG4-ELISAs to Investigate Epidemiology of Strongyloidiasis in Northeast Thailand.* Am J Trop Med Hyg 2024; 110(2):254-262.

5. Noordin R, Osman, Kalantari N, Anuar NS, Gorgani-Firouzjaee T, Sithithaworn P, Juri NM, Rahumatullah A. *A point-of-care cassette test for detection of Strongyloides stercoralis*. Acta Tropica 2022; 226:106251.

6. Tamarozzi F, Guevara ÁG, Anselmi M, Vicuña Y, Prandi R, Marquez M, Vivero S, Robinzón Huerlo F, Racines M, Mazzi C, Denwood M, Buonfrate D. *Accuracy, acceptability, and feasibility of diagnostic tests for the screening of Strongyloides stercoralis in the field (ESTRELLA): a cross-sectional study in Ecuador*. Lancet Glob Health. 2023 May;11(5):e740-e748.

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